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S. Trenoseni

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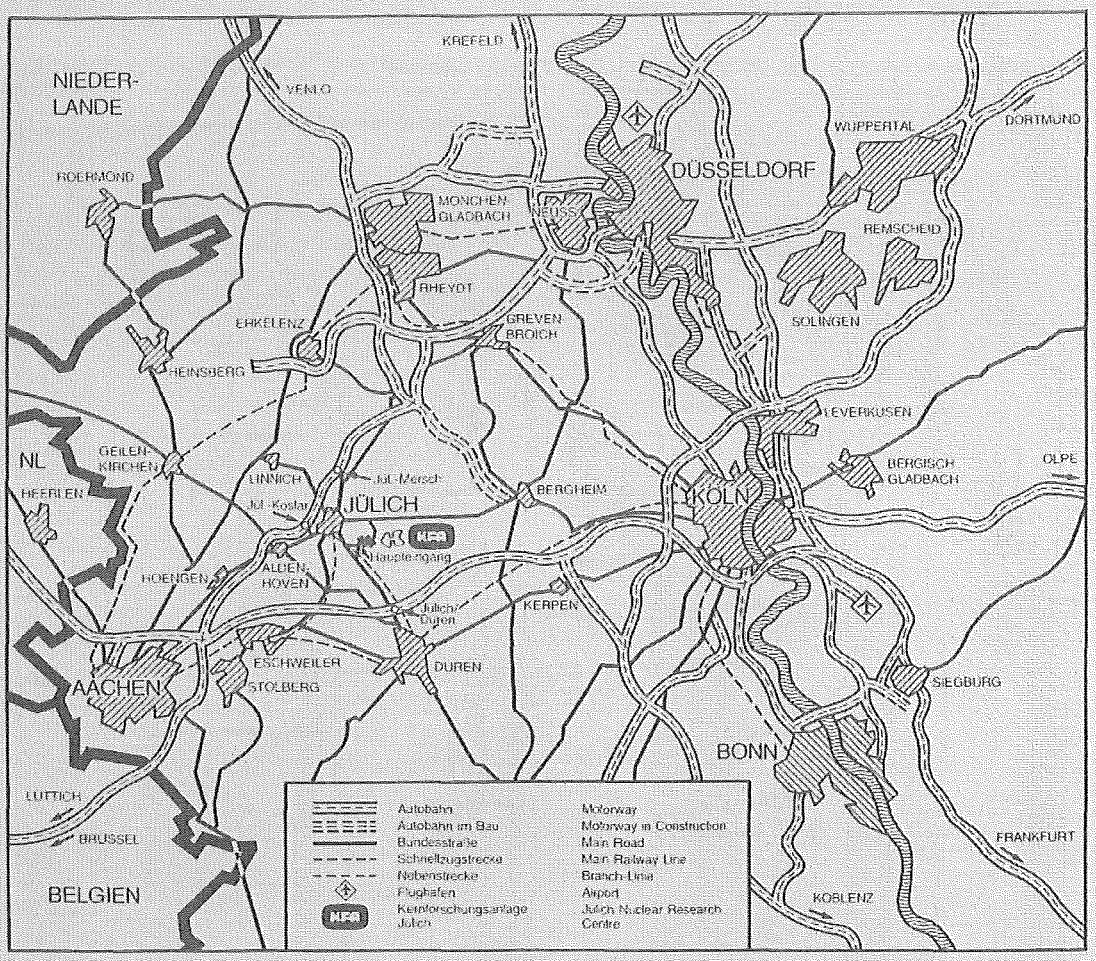

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Anhang zu Jül – Spez – 182

von

S. Trencseni

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Die am Zeilenanfang stehenden Schlüsselwörter haben folgende Bedeutung für die jeweilige Veröffentlichung:

TIT - Titel

AUT - Autor

QUE - Quelle aus der die Veröffentlichung entnommen wurde

KEY - für die Veröffentlichung relevante Schlagwörter

DAT - Erscheinungsdatum

FIR - Erstellungsort

DET - Detailinformation

KAP - Rückverweis auf das Kapitel des Berichts, dem die Veröffentlichung thematisch zuzuordnen ist

ABS - Abstract

NUM 1
TIT WAS IST EIN LOKALES RECHNERNETZ?
AUT K. STEMBERGER
QUE ELEKTRONISCHE RECHENANLAGEN, 1981,HEFT 4, S. 168 - 172
KEY KENNZEICHEN - RINGKONFIGURATION - BUSSYSTEME - ETHERNET
KEY HYPERCHANNEL - BUFFER INSERTION - CSMA/CD - MITRENET
KEY EINSATZGEBIET
DAT 03.80
FIR SIEMENS, MUENCHEN
DET STANDARDMAESSIGE PROTOKOLLE - RATE - ISO - ECMA - IEEE - CCITT
KAP 2

ABS IN EINEM TYPISCHEN LOKALEN RECHNERNETZ SIND BIS ZU ETWA 250 RECHNER
ABS ODER INTELLIGENTE STATIONEN ZUSAMMENGESCHLOSSEN. DIE ENTFERNUNG
ABS ZWISCHEN DEN EINZELNEN RECHNERN BZW STATIONEN LIEGT ZWISCHEN 100
ABS UND 10000 M, DIE DATENUEBERTRAGUNGSRATE BEI EINIGEN MBIT/S. DER
ABS VERKEHR ERFOLGT VON JEDEM ZU JEDEM TEILNEHMER. HAEUFIG GIBT ES EI-
ABS NEN UEBERGANG ZU EINEM / MEHREREN OEFFENTLICHEN NETZEN. ER WIRD
ABS DURCH SPEZIELLE KOMPONENTEN, SOG. GATEWAYS, DIE WIE RECHNER AN DAS
ABS LOKALE UEBERTRAGUNGSMEDIUM ANGEKOPPELT WERDEN, REALISIERT. LOKALE
ABS RECHNERNETZE WERDEN DIE GROSSRECHNER NICHT VERDRAENGEN KOENNEN. ES
ABS WIRD ABER IN VIELEN FAELLEN VORTEILHAFT SEIN, DIE EINZELNEN KOMPO-
ABS NENTEN EINES GROSSRECHNERS NICHT MEHR STERNFOERMIG ZU KONZIPIEREN,
ABS SONDERN UEBER EIN GEMEINSAMES UEBERTRAGUNGSMEDIUM ZU VERBINDEN, SO
ABS DASS DATENVERKEHR VON JEDER ZU JEDER KOMPONENTE MOEGLICH IST, OHNE
ABS DASS EINE EINZELNE KOMPONENTE UEBERMAESSIG BELASTET WIRD.
ABS

NUM 2
TIT SIMULATION OF LOCAL COMPUTER NETWORKS - A CASE STUDY .
AUT YEH
QUE COMPUTER NETWORKS 1979, HEFT 3, S. 401 - 417
KEY SIMULATION - LOCAL NETWORK - PROTOCOL - HYPERCHANNEL - LLL
KEY
KEY
DAT 08.79
FIR FORD AEROSPACE AND COMMUNICATIONS - LLL
DET RATE - ANZAHL - LAENGE - ZUGANG - PERFORMANCE
KAP 3.4

ABS THIS PAPER IS A REPORT ON THE MODELING TECHNIQUE EMPLOYED IN
ABS SIMULATING SEVERAL LOCAL NETWORKS THAT USE NETWORK SYSTEMS CORP
ABS HYPERCHANNEL PRODUCTS. THE TECHNIQUE INVOLVES INCREMENTAL MODELING
ABS BASED ON SYSTEMATIC MODEL CONSTRUCTION AND VALIDATION. THREE
ABS LEVELS OF INCREMENTATION WERE USED, WITH EACH LEVEL SYSTEMATICALLY
ABS CONSTRUCTED AND VALIDATED ACCORDING TO THE HYPERNET PROTOCOL
ABS CORRESPONDING TO IT. THE DETAILED TASKS OF MODEL CONSTRUCTION AND
ABS VALIDATION FOR EACH LEVEL OF MODEL ARE DISCUSSED IN THIS PAPER.
ABS
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NUM 3
TIT INTERTASK COMM PRIMITIVES FOR DISTRIBUTED COMP CONTR SYS
AUT J. KRAMER - J. MAGEE - M. SLOMAN
QUE PROC OF THE 2ND INTL CONF ON DISTRIBUTED COMPUTING SYS PARIS
KEY NETWORK SOFTWARE - TASK - EVENT - QUERY - SOURCE - OBJECT - REPLY -
KEY TRANSACTION - IMMEDIATE/DELAYED RESPONSE - REQUEST - OUTSTANDING -
KEY RESPONSE TIME - INITIATE - ACCEPT - SERVICE - COMPLETE - BUFFER
DAT 04.81
FIR IMPERIAL COLLEGE, LONDON
DET ---
KAP 8.

ABS THIS IS A STUDY OF INTERTASK COMMUNICATION PRIMITIVES SUITABLE FOR
ABS A DISTRIBUTED PROCESS CONTROL ENVIRONMENT. THE COMMUNICATION RE-
ABS QUIREMENTS ARE IDENTIFIED IN TERMS OF TWO TRANSACTION TYPES WHICH
ABS ARE CHARACTERISTIC OF PROCESS CONTROL APPLICATIONS. THE REQUIRE-
ABS MENTS FOR TASK BEHAVIOUR, ROBUSTNESS AND RESPONSE TIME ARE DESCRI-
ABS BED. EXISTING PROPOSALS FOR COMMUNICATION PRIMITIVES ARE EXAMINED
ABS AND FOUND TO BE WANTING. A SET OF PRIMITIVES ARE PROPOSED WHICH
ABS MATCH THE REQUIREMENTS MORE SATISFACTORILY THAN EXISTING PROPOSALS.
ABS INFORMATION TRANSFER CATEGORIES: COMMAND/STATUS/ALARM;
ABS TRANSACTION TYPES: REQUEST REPLY/NOTIFY; ...TASK BEHAVIOUR...
ABS COMMUNICATION PRIMITIVES: ASYNCHRONOUS SEND/SYNCHRONOUS SEND/
ABS   REMOTE PROCEDURE CALL;
ABS PROPOSALS FOR COMMUNICATION PRIMITIVES: SEND-WAIT & RECEIVE-REPLY
ABS (REQUEST-REPLY TRANSACTION)/SEND & RECEIVE (NOTIFY TRANSACTION)/
ABS ERROR HANDLING;

NUM 4
TIT AN OVERVIEW OF THE AMOEBA DISTRIBUTED OPERATING SYSTEM
AUT A.S. TANENBAUM - S.J. MULLENDER
QUE OPERATING SYSTEMS REVIEW, VOL 15, NO 3, S.51-64
KEY DISTRIBUTED FILE SYSTEM - DISK SERVER - PROCESS
KEY AMOEBA - UNIX - ISO - PROTOCOL - NETWORK SOFTWARE - DATA LINK LAYER
KEY TRANSPORT LAYER
DAT 07.81
FIR UNI AMSTERDAM
DET ISO
KAP 8.

ABS THE DESIGN OF GENERAL PURPOSE DISTRIBUTED OPERATING SYSTEMS IS ONE
ABS OF THE KEY RESEARCH ISSUES FOR THE 1980S. THIS PAPER DESCRIBES THE
ABS DESIGN OF A DISTRIBUTED OPERATING SYSTEM, AMOEBA, INTENDED TO CONT-
ABS ROL A COLLECTION OF MACHINES BASED ON THE POOL-OF-PROCESSORS IDEA
ABS (UNIX* OS). BASIC COMPONENTS OF AMOEBA: PROCESSES, MESSAGES, PORTS.
ABS THE PARADIGM OF AMOEBA FOR MODELING INTERPROCESS COMMUNICATION IS
ABS THE SERVICE; SERVICES FALL INTO TWO CATEGORIES: PUBLIC/PRIVATE. THE
ABS ENTIRE PROTECTION SYSTEM IS BASED ON KNOWLEDGE OF PORT NAMES. THE
ABS AMOEBA PROTOCOLS ARE STRUCTURED HIERARCHICALLY (PHYS/DATA LINK/MON/
ABS TRANSPORT/SYSTEM CALL/APPL). BASIC FILE SYSTEM: DIRECTORY SERVER
ABS (LOOKUP;READALL;ENTER;REMOVE;MAKEDIR;CHMOD)/FLAT FILE SERVER (READ;
ABS WRITE;READEXTRADATA;WRITEEXTRADATA;DESTROY;STATUS;LOCK;UNLOCK;RE-
ABS STRICT;RETRACT;CREATE;RECOVER)/SIMPLE DISK SERVER(ASSIGNBLOCK;READ-
ABS BLOCK;WRITEBLOCK;FREEBLOCK;RECOVER). PROCESS MANAGEMENT: PROCESS
ABS CREATION (PROCESS DESCRIPTOR); PROCESS MIGRATION.

NUM 5
TIT THC - A SIMPLE HIGH-PERFORMANCE LOCAL NETWORK
AUT J.KNIGTH - M. ITZKOWITZ
QUE PROC OF THE 2ND INTL CONF ON DISTRIBUTED COMPUTING SYS PARIS
KEY HYPERCHANNEL - NETWORK OPERATING SYSTEM - SIMPLE
KEY
KEY
DAT 04.81
FIR LAWRENCE BERKELEY LABORATORY
DET CONNECTION - PERFORMANCE - PSEUDOCODE
KAP 8

ABS WE DESCRIBE OUR NEED FOR A LOCAL NETWORK AND THE REASONS WE CHOSE
ABS HYPERCHANNEL AS THE HARDWARE WITH WHICH TO IMPLEMENT IT. WE THEN
ABS PRESENT OUR REASONS FOR CHOOSING INTERPROCESS COMMUNICATION AS THE
ABS PRINCIPAL SERVICE OF THC (THE HYPERCHANNEL CONNECTION) AND THE
ABS DESIGN CHOICES MADE IN SPECIFYING THE NETWORK. WE THEN DESCRIBE THE
ABS STRUCTURE AND OPERATION OF THE NETWORK. WE GO ON TO DESCRIBE THE
ABS PSEUDOCODE TECHNIQUE USED TO COMPLETE THE DESIGN AND WE BRIEFLY
ABS DISCUSS THE SPECIFIC IMPLEMENTATIONS FOR THE VARIOUS SYSTEMS IN OUR
ABS NETWORK. FINALLY WE GIVE PERFORMANCE MEASUREMENTS FOR THE ACTUAL
ABS IMPLEMENTATION AND PRESENT OUR CONCLUSIONS.
ABS
ABS
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NUM 6
TIT A DISTRIBUTED OPERATING SYSTEM FOR THE STONY BROOK MULTICOMPUTER
AUT R.B.KIEBURTZ
QUE PROC OF THE 2ND INTL CONF ON DISTRIBUTED COMPUTING SYS PARIS
KEY HIERARCHICAL - POINT TO POINT - NETWORK OPERATIN SYSTEM
KEY TOPOLOGIE - BAUM
KEY
DAT 04.81
FIR UNI NEW YORK, STONY BROOK
DET UNIX
KAP 8 - 2.2.3

ABS THE STONY BROOK MULTICOMPUTER IS HIERARCHIALLY ORGANIZED NETWORK OF
ABS COMPUTER NODES THAT HAS BEEN DESIGNED TO SUPPORT PROBLEM-SOLVING BY
ABS DECOMPOSITION. HIGH PERFORMANCE, RELATIVE TO THE SPEED OF ITS INDI-
ABS VIDUAL PROCESSORS, IS ONE OF ITS PRIMARY DESIGN GOALS. THIS PAPER
ABS DESCRIBES THE DESIGN OF A MESSAGE-BASED, DISTRIBUTED, OS-NUCLEUS
ABS FOR THE NETWORK. THE NUCLEUS OF AN OS PROVIDES AN INTERFACE BETWEEN
ABS A PHYSICAL MACHINE AND HIGHER LEVELS OF SOFTWARE THAT IMPLEMENT
ABS ABSTRACT RESOURCES TO BE USED BY APPLICATIONS PROGRAMS. THUS IT IS
ABS STRONGLY INFLUENCED BY THE HARDWARE ARCHITECTURE OF A SYSTEM. THE
ABS DESIGN PHILOSOPHY IS TO CREATE LEVELS OF ABSTRACT MACHINES, AND TO
ABS EMBED THE NECESSARY COMMUNICATION PROTOCOLS INTO THESE ABSTRACT
ABS MACHINES. THE SYSTEM SUPPORTS A HIERARCHY OF DISTRIBUTED FILE
ABS SYSTEMS, WITH CAPABILITY-BASED PROTECTION.
ABS
ABS

NUM 7
TIT AUFBAU VON LOKALEN HOCHGESCHWINDIGKEITSNETZEN MIT HYPERCHANNEL
AUT G. TRAUTZL
QUE VORTRAG
KEY LOKALE NETZWERKE - ADAPTERTYPEN - HYPERCHANNEL - ANFORDERUNGEN
KEY
KEY
DAT 01.81
FIR TESDATA
DET HYPERCHANNEL ANWENDUNGEN
KAP 3.1.1

ABS DER TREND ZUR DEZENTRALEN VERARBEITUNG SETZT SICH FORT. DER
ABS AUFSATZ BESCHREIBT STICHWORTARTIG DIE BEDEUTUNG DES HYPERCHANNEL
ABS FUER DIESEN SACHVERHALT.
ABS ...FRUEHER/JETZT...;...DEFINITION LOKALES NETZ ...;...ANFORDERUNGEN
ABS HC PROCESSORADAPTER/HC DEVICEADAPTER/HC LINKADAPTER
ABS ANWENDUNGSBEISPIELE: UNI LONDON (CDC + PDP)
ABS CISI (IBM + CRAY)
ABS MASSTOR
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NUM 8
TIT TERMINALS, MINICOMPUTER UND GROSSRECHNER IN DCA-NETZWERKEN
AUT K. PLASS
QUE ELEKTRONISCHE RECHENANLAGEN, 1981, HEFT 5, S.225-230
KEY DCA - ISO
KEY
KEY
DAT 07.81
FIR SPERRY UNIVAC
DET
KAP 4.4

ABS DIE SPERRY UNIVAC ARCHITEKTUR DCA WURDE 1976 ALS KONZEPT FUER
ABS VERTEILTE SYSTEME ODER AUCH KOMMUNIKATIONSSYSTEME ANGEKUENDIGT.
ABS DCA BESCHREIBT UND FIXIERT METHODEN UND VERFAHREN FUER DIE
ABS ARCHITEKTUR VERTEILTER SYSTEME. DER VORLIEGENDE AUFSATZ STELLT
ABS DAS DCA-KONZEPT VOR.
ABS
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NUM 9
TIT DAS MODELLIERUNGSSYS MOSAIC ZUR ANALYSE UND OPTIMIERUNG ...
AUT B.WOLFINGER
QUE ELEKTRONISCHE RECHENANLAGEN, 1981, HEFT 5, S.199-211
KEY
KEY
KEY
DAT 03.81
FIR UNI KARLSRUHE
DET
KAP 5

ABS DIE REALISIERUNG VON RN VERLANGT NACH LEISTUNGSFAEHIGEN WERKZEUGEN
ABS ZUR UNTERSTUETZUNG DES ENTWURFS UND DER ANA DER RNDIENSTE. DAS MO-
ABS DELLIERUNGSSYS MOSAIC STELLT EIN DERARTIGES AUF DER RECHNGEST SIMU
ABS BASIERENDES WERKZEUG DAR, DAS EINEN VERGL VON PLANUNGS- UND ENT-
ABS WURFSALT SOWIE DAS ERKENNEN MOEGL ENGPAESSE DURCH VORHERSAGE WICH-
ABS TIGER LEISTUNGSKENNGROESSEN FUER RN ERLAUBT. DIE GEN SIMULATIVEN
ABS MOD, DIE MOSAIC ZUGRUNDE LIEGEN, GESTATTEN EINE PRAEZISE BESCHR DES
ABS VERHALTENS VON COMMPROTOKOLLEN UND IHRER HIERAR UNTER GLEICHZEITI-
ABS GER MITEINBEZIEHUNG DER BETRIEBSMITTELZUTEILUNG IN DEN KOMMUN R.
ABS MITTELS EINES GRAPH BENINT LAESST SICH AUS DIESEN MOD EIN ABLAUF-
ABS FAEHIGES SIMUPROG KONFIGURIEREN (HOHER GRAD AN BENUTZERNAEHE).
ABS MOSAIC WURDE BEREITS ERFOLGREICH AN VERSCHIEDENE EXISTIERENDE RN
ABS MIT KOMPLEXEN PROTOKOLLHIERAR ANGEPASST.
ABS
ABS

NUM 10
TIT EINFLUSS DER LOKALEN NETZE AUF DAS MANAGEMENT UND AUF FACHABTEIL..
AUT KLAUS SPIEGEL
QUE PROC TELECOM 81 - BAND 1 - SEITE 118
KEY ETHERNET-HYPERCHANNEL-LCN-IEEE 802-PROWAY-SYSTEMNAHER BEREICH-
KEY LOKALER BEREICH-STERN-RING-BUS-ANFORDERUNG AN LAN-BUROBEREICH-
KEY ANWENDUNGSBEREICHE-PRODUKTIONSBEREICH
DAT 11. 81
FIR XEROX
DET IEEE 802 - PROWAY
KAP 2.1

ABS 1. DER KOMMUNIKATIONSBEREICH LOKALER NETZE:
ABS   LOKALE NETZE
ABS   DATENFERNUEBERTRAGUNG
ABS   SYSTEMNAHER BEREICH
ABS   BILD: X->KM Y->BIT/S 3 VIERECKE
ABS
ABS 2. TECHNOLOGIEALTERNATIVEN:
ABS   STERN/BUS/RING + RUNDFUNKSYSTEME + ZWEIDRAHT/KOAX/LICHTLEITER
ABS   +BASE/BROAD
ABS
ABS 3. ANWENDUNGSBEREICHE:
ABS   SYSTEMNAHER BEREICH
ABS   PRODUKTIONSBEREICH (PROZESSUEBERWACHUNG)
ABS   BUEROBEREICH
ABS   UEBERGANG ZU OEFFENTLICHEN NETZEN

NUM 11
TIT INTERACTION BETWEEN PROTOCOL LEVELS IN PRIORITIZED CMSA BROADCAST..
AUT J.E. DONELLY; J.W. YEH
QUE COMPUTER NETWORKS, 1979, HEFT 3, S.9-23
KEY PROTOCOL - CMSA - BROADCAST NETWORK - LOCAL NETWORK -
KEY CONTENTION RESOLUTION - HYPERCHANNEL - SIMULATION
KEY ACCESS PROTOCOL - ADAPTER RESERVATION
DAT 08.78
FIR LLL
DET ZUGANG - FLOWDIAGRAM OF FIRMWARE - PERFORMANCE MEASUREMENTS
KAP 2.2.6

ABS DISCRETE EVENT SIMULATION STUDIES OF THE HYPERCHANNEL DEMONSTRATE
ABS SURPRISING PERFORMANCE VARIATIONS RESULTING FROM RATHER SUBTLE
ABS PROTOCOL, TIMING, AND TOPOLOGY CHANGES. EARLY ANALYTIC AND
ABS SIMULATION STUDIES SHOWED THE EFFECTIVENESS OF THE LOWEST LEVEL
ABS HYPERCHANNEL CONTENTION MECHANISMS. LATER SIMULATIONS, INCLUDING
ABS THE NEXT LEVEL OF MICROCODED ERROR AND FLOW CONTROL PROTOCOLS,
ABS SHOWED THAT GREAT CARE MUST BE TAKEN TO MAINTAIN HIGH TRUNK
ABS UTILIZATION THROUGH BOTH PROTOCOL LEVELS. EXAMPLES OF PERFORMANCE
ABS DEGRADATION ARISING FROM INTERACTION BETWEEN THE TWO PROTOCOL
ABS LEVELS ILLUSTRATE THE TYPE OF INFORMATION THAT CAN BE OBTAINED
ABS FROM SIMULATION ANALYSIS OF COMMUNICATION SYSTEMS TOO COMPLEX FOR
ABS CURRENT STATE OF THE ART MATHEMATICAL MODELS.
ABS
ABS
ABS

NUM 12
TIT A NETWORK STORAGE SYSTEM
AUT G.S CHRISTENSEN
QUE ---
KEY HYPERCACHE - STORAGE SYSTEM WITH PROCESSOR - STORAGE COMMANDS
KEY APPLICATIONS - MEMORY BANKS
KEY
DAT 01.79
FIR NETWORK SYSTEMS CORPORATION NSC
DET 8 MBYTE - 50 MHZ - ADAPTER
KAP 3.1.1

ABS THE CONCEPT OF A COMMON HIGH SPEED MEMORY ACCESSIBLE BY MULTIPLE
ABS COMPUTING EQUIPMENTS VIA A LOCAL NETWORK HAS BEEN UNDER STUDY AT
ABS NETWORK SYSTEMS FOR SEVERAL YEARS. THE OBJECTIVES OF THE NETWORK
ABS STORAGE SYSTEM ARE TO PROVIDE A CACHE MEMORY FOR CPU-CPU AND
ABS PERIPHERAL TRANSFERS, PROVIDE A STORE-AND-FORWARD MESSAGE SWITCHING
ABS SERVICE ON THE LOCAL NETWORK AND FINALLY PROVIDE A BACKEND STORAGE
ABS SYSTEM. THESE OBJECTIVES HAVE LEAD TO THE DEFINITION OF A LOCAL
ABS NETWORK ATTACHED ELECTRONIC MEMORY WHICH USES A VIRTUAL ADDRESS
ABS SCHEME AND WHICH CAN BE EXTENDED BY MASS STORAGE DEVICES SUCH AS
ABS CCD MEMORY, DISK DRIVES, TAPE DRIVES AND ARCHIVE SYSTEMS. THIS
ABS PAPER REPORTS ON THE DESIGN FOR A NETWORK STORAGE SYSTEM AND THE
ABS STATUS OF THE ASSOCIATED PRODUCT DEVELOPMENT.
ABS
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ABS

NUM 13
TIT LOKALE NETZE: ALLES IM FLUSS (COUNT-SYMPOSIUM)
AUT K. MIERZOWSKI; (H.P. BOELL)
QUE ELEKTRONISCHE RECHENANLAGEN, 1981, HEFT 6, S.288-290
KEY DIKOS - ETHERNET - WANGNET - ISDN - TDMA - CSMA/CD - BREITBAND -
KEY ZUERICH-RING - TOKEN - CBX - PROTOKOLL - STANDARDISIERUNG -
KEY PURDUE - IEEE - DIX
DAT 11.81
FIR ---
DET SIEMENS ISDN - CBX - DIX - IEEE 802 - PURDUE/PROWAY
KAP 2

ABS NACH EINEM EINFUEHRENDEN UEBERSICHTSVORTRAG VON BOELL KAMEN AEG-
ABS TELEFUNKEN MIT DIKOS, RANK XEROX UND NIXDORF MIT ETHERNET SOWIE
ABS WANG MIT WANGNET ZU WORT. AUSSERDEM STELLTE SIEMENS IHR ISDN UND
ABS IBM (KUEMMERLE) EIN IN ZUERICH UNTERSUCHTES RINGSYSTEM VOR.
ABS DAS VON DER DEUTSCHEN BUNDESPOST GEPLANTE ISDN (INTEGRATED SERVICES
ABS DIGITAL NETWORK) GESTATTET DIE INTEGRATION ALLER KOMMUNIKATIONS-
ABS FORMEN MIT AUSNAHME DER BREITBANDKOMMUNIKATION (BEWEGTBILD).
ABS DIE BEGRIFFE CBX (COMPUTERIZED BRANCH EXCHANGE) UND LAN (LOCAL AREA
ABS NETWORK) WERDEN VONEINANDER ABGEGRENZT.
ABS FAZIT DES SYMPOSIUMS: ES IST ALLES IM FLUSS; EIN ENDE DIESER PHASE
ABS IST NICHT VOR 1985/86 ZU ERWARTEN. VORDERGRUENDIGES ZIEL MUSS DAS
ABS BEMUEHEN UM EINHEITLICHE PROTOKOLLE UND SOFTWARE SEIN. DAMIT BE-
ABS SCHAEFTIGEN SICH 3 GRUPPEN: 1. PURDUE WORKSHOP/PROWAY (TC5A DER
ABS IEC/SC 65A/WG6); 2. DIX; 3.IEEE COMPUTER SOCIETY. ERGEBNISSE SIND
ABS NICHT VOR 3 JAHREN ZU ERWARTEN.

NUM 14
TIT LOCAL AREA SUBNETWORKS: A PERFORMANCE COMPARISON
AUT W. BUX
QUE IEEE TRANSACTIONS ON COMMUNICATIONS, VOL.COM-29, NO.10
KEY CSMA/CD - MLMA - TOKEN - ZUGANG - ACCESS - SLOTTED RING -
KEY ORDERED ACCESS BUS - SIMULATION - PERFORMANCE
KEY DELAY/THROUGHPUT
DAT 10.81
FIR IBM ZUERICH, RESEARCH LAB
DET TOKEN - SLOTTED RING - MLMA - CSMA
KAP 2.2.6- 3.5

ABS BROADCAST FASHION REPRESENT ATTRACTIVE ALTERNATIVES TO
ABS STORE-AND-FORWARD AND CIRCUIT-SWITCHING NETWORKS.
ABS FOUR IMPORTANT CANDIDATES FOR LOCAL-AREA SUBNETWORKS ARE
ABS CONSIDERED IN THIS PAPER:TOKEN RING; SLOTTED RING (EMPTY-SLOT
ABS TECHNIQUE); A RANDOM-ACCESS BUS (CARRIER SENSE MULTIPLE-ACCESS
ABS (CSMA) WITH COLLISION DETECTION); AN ORDERED-ACCESS BUS
ABS (MULTILEVEL MULTIPLE-ACCESS(MLMA) SCHEME).
ABS THIS PAPER PROVIDES A COMPARATIVE EVALUATION OF THE PERFORMANCE
ABS OF THESE SYSTEMS IN TERMS OF THE DELAY-THROUGHPUT CHARACTERISTICS.
ABS THE INVESTIGATION IS BASED ON ANALYTIC MODELS WHICH DESCRIBE THE
ABS VARIOUS TOPOLOGIES AND ACCESS MECHANISMS TO A SUFFICIENT LEVEL OF
ABS DETAIL. THE PAPER INCLUDES A COMPREHENSIVE DISCUSSION OF HOW THE
ABS PERFORMANCE OF THE DIFFERENT NETWORKS IS AFFECTED BY SYSTEM
ABS PARAMETERS LIKE TRANSMISSION RATE, CABLE LENGTH, PACKET LENGTHS,
ABS AND CONTROL OVERHEAD.

NUM 15
TIT ORGANISATIONSFORMEN VERTEILTER INFORMATIONSSYTEME
AUT H. SCHWAERTZEL; W. SAMMER
QUE ONLINE 10/81, S.772-777
KEY TERMINALSYSTEM - KOMMUNIKATIONSSYSTEM - TOPOLOGIE - ZENTRALSYSTEM
KEY RECHNERVERBUND - DATENVERBUND - FUNKTIONSVERBUND - LASTVERBUND -
KEY SICHERHEITSVERBUND - PARTIELL DISTRIBUIERT - STRENG DISTRIBUIERT
DAT 10.81
FIR SIEMENS FORSCHUNGSLABORATORIUM, MUENCHEN
DET DIANE
KAP 2. - 2.2.2 - 2.2.3

ABS EIN INFORMATIONSSYSTEM BESTEH IM WESENTLICHEN AUS DREI TECHNISCHEN
ABS SUBSYSTEMEN: TEMINALSYSTEM/KOMMUNIKATIONSSYSTEM (DARSTELLUNG DER
ABS WICHTIGSTEN NETZTOPOLOGIEN)/ZENTRALSYSTEM.
ABS KLASSIFIZIERUNG VON INFORMATIONSSYSTEMEN: ZENTRALISIERT/PARTIELL
ABS DISTRIBUIERT/STRENG DISTRIBUIERT
ABS KLASSIFIZIERUNG VON RECHNERVERBUNDSYSTEMEN:
ABS DATENVERBUND/FUNKTIONSVERBUND/LASTVERBUND/SICHERHEITSVERBUND.
ABS DIE HEUTE KONKRET EINGESETZTEN RECHNERNETZE WERDEN MEIST NACH DREI
ABS KRITERIENPAAREN TYPISIERT: HOMOGEN-HETEROGEN/OFFEN-GESCHLOSSEN/
ABS OEFFENTLICH-PRIVAT.
ABS
ABS AUF DEM WEG ZU STRENG DISTRIBUIERTEN INFORMATIONSSYSTEMEN
ABS
ABS
ABS

NUM 16
TIT SIMULATION STUDY OF THE TRAFFIC DEPENDENT PERFORMANCE OF A ...
AUT W.B. WATSON
QUE PROC OF THE 2ND INTL CONF ON DISTRIBUTED COMPUTING SYS PARIS
KEY INTERACTION-MESSAGE AND TRUNK CONFIG-CSMA-THROUGHPUT-FRAME-FILE STO
KEY TRAFFIC PATTERN-TRANSFER RATES-HOST-ADAPTER-MULTIPLEX/BURST MODE
KEY ENHANCED EXPONENTIAL BACKOFF/RETRY-RESERV ONLYFOR RETRY-LOAD-IMPACT
DAT 04.81
FIR LLL, LIVERMORE, CALIFORNIA
DET HYPERCHANNEL PROTOCOL
KAP 3.1.1

ABS A CSMA BROADCAST NETWORK ENGAGED IN SHORT TO VERY LONG MESSAGE
ABS TRANSMISSION HAS BEEN STUDIED VIA A DISCRETE EVENT SIMULATION.
ABS THESE STUDIES IMPLY THAT NO ADVANTAGE IS TO BE OBTAINED IN A TWO
ABS TRUNK NETWORK BY DEDICATING ONE TRUNK TO LONG MESSAGE TRANSMISSION
ABS AND THE OTHER TO SHORT MESSAGE TRANSMISSION. THE THROUGHPUT OF A
ABS SINGLE TRUNK, MULTIPORT NETWORK IS REDUCED WHEN ONE OF THE PORTS IS
ABS ATTACHED TO A HOST WITH A SLOWER HOST TO PORT TRANSFER RATE THAN
ABS THE OTHERS. A CSMA BROADCAST NETWORK WHEREIN ALL HOSTS INTERACT
ABS WITH THE SAME DESTINATION CAN BE PRONE TO THRASHING ESPECIALLY AT
ABS HIGH LOADS. THE NETWORKS SUMMARIZED ABOVE BEHAVE AS DESCRIBED IN
ABS THIS PAPER LARGELY BECAUSE THE CRITICAL RESOURCE IS HOST/ADAPTER
ABS AVAILABILITY AND SPEED, AND NOT THE NUMBER OR CAPACITY OF THE
ABS TRUNKS, AND SECONDARILY DUE TO CERTAIN INADEQUACIES OF THE SECOND
ABS LEVEL PROTOCOL.
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NUM 17
TIT MESSAGE-BASED PRIORITY ACCESS TO LOCAL NETWORKS
AUT I. CHLAMTAC; W.R. FRANTA
QUE COMPUTER COMMUNICATIONS, 1980, HEFT 2, S.77-84
KEY ANALYTHIC PERFORMANCE DERIVATIONS
KEY
KEY
DAT 04.80
FIR COMPUTATION LAB, UNI MINNESOTA - SPACE SCIENCE CENTER, MINNEAPOLIS
DET HYPERCHANNELL BIU PROTOCOL
KAP 3.1.1

ABS HYPERCHANNEL INTERFACES ARE DESIGNED TO INTERFACE COMPUTER MAIN-
ABS FRAMES AND PERIPHERAL EQUIPMENT TO A HIGH SPEED BUS TO FORM A LOCAL
ABS NETWORK. EACH INTERFACE EXECUTES A DISTRIBUTED CONTROL CONTENTION
ABS ACCESS ALGORITHM OPERATION REVOLVES ABOUT FIXED PRIORITIES ASSIGNED
ABS TO THE INDIVIDUAL INTERFACES. THE ACCESS ALGORITHM IS EXTENDED TO
ABS PROVIDE FOR MESSAGE-ASSIGNED PRIORITIES, TO PROVIDE BETTER BUS
ABS ACCESS RIGHTS FOR HIGHER CLASSES OF MESSAGES AT THE EXPENSE OF DE-
ABS GRADED ACCESS RIGHTS FOR THE LOWER CLASSES OF MESSAGES. THE EXTEN-
ABS SION REQUIRES LITTLE ADDITIONAL NEW HARDWARE BUT INSTEAD EMPLOYS A
ABS REPLICATION IN EACH INTERFACE OF EXISTING HARDWARE. THE ORIGINAL
ABS HYPERCHANNEL INTERFACE ACCESS MECHANISM IS EXPLAINED. THE ALGORITHM
ABS EXTENSION IS DESCRIBED AND TWO MODELS ARE DEVELOPED TO ASSESS ITS
ABS EFFECT ON MESSAGE TRANSMISSION ACCESS RIGHTS, AND VIA THESE MODELS
ABS THE VIABILITY OF THE EXTENDED ALGORITHM CAN BE DEMONSTRATED
ABS QUANTITATIVELY.

NUM 18
TIT A SURVEY OF TERMINAL PROTOCOLS
AUT F. MAGNEE; A. ENDRIZZI; J. DAY
QUE COMPUTER NETWORKS, 1979, HEFT 3, S.299-314
KEY HETEROGENEOUS COMPUTER NETWORKS - PROTOCOLS - TERMINAL PROTOCOL
KEY VIRTUAL TERMINAL PROTOCOL
KEY
DAT 03.81
FIR UNI LUETTICH
DET VTP PROPOSALS, VTP ARCHITECTURE
KAP 2.2.7.4

ABS THE VIRTUAL TERMINAL APPROACH HAS BEEN USED FIRST BY THE ARPANET IN
ABS THE U.S. IN THE LAST FEW YEARS, THE PROBLEM OF DEFINING VIRTUAL
ABS TERMINAL PROTOCOLS HAS BEEN APPROACHED BY SEVERAL INTERNATIONAL OR-
ABS GANIZATIONS SUCH AS EIN,EURONET,IFIP AND BY NATIONAL ORGANIZATIONS
ABS SUCH AS THE BELGIAN UNIVERSITY NETWORK, THE GERMAN PIX NETWORK, THE
ABS FRENCH CYCLADES NETWORK AND INFOREP. ASSOCIATED MANUFACTURERS HAVE
ABS ALSO PRESENTED A PROPOSAL. TILL NOW, AN INTERNATIONALLY ACCEPTED
ABS VIRTUAL TERMINAL PROTOCOL HAS NOT YET EMERGED. THE AIM OF THIS
ABS PAPER IS TO COMPARE DIFFERENT PROTOCOLS. IT IS DIVIDED INTO FOUR
ABS MAIN PARTS: 1. PRESENTATION OF THE RELATIONSHIPS BETWEEN VIRTUAL
ABS TERMINAL PROTOCOL AND NETWORK ARCHITECTURE;
ABS 2. ANALYSIS OF THE DIFFERENT VIRTUAL TERMINAL MODEL;
ABS 3. ANALYSIS OF THE SET OF PRIMITIVES INTENDED TO DATA
ABS STRUCTURE DEFINITION AND MANAGEMENT;
ABS 4. INTRODUCTION TO THE SYNCHRONIZATION MECHANISMS

NUM 19
TIT VALUE ADDED NETWORKS
AUT P. BOCKER
QUE ---
KEY ALLGEMEINE DIENSTE - PROTOKOLLANPASSUNG - SPEICHERDIENSTE
KEY PROZESSORDIENSTE - ACS - XTEN - SBS - IDN
KEY
DAT 01.80
FIR ---
DET
KAP

ABS AUSGEHEND VON DEN USA IST SEIT EINIGER ZEIT DAS SCHLAGWORT
ABS VALUE ADDED NETWORK AUFGEKOMMEN. DER BEGRIFF WIRD STICHWORTARTIG
ABS BELEUCHTET.
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NUM 20
TIT HERSTELLERUNABHAENGIGE NETZWERKKONZEPTE ALS PLANUNGSALTERNATIVE
AUT B. VOGEL
QUE ELEKTRONISCHE RECHENANLAGEN, 1981, HEFT 1, S.28-33
KEY RECHNERVERBUND - PROTOKOLL - ISO - DATENPAKETVERMITTLUNG - EHKP
KEY PIX - PAPA - ORGANISATION - INFORMATIONSTECHNOLOGIE
KEY
DAT 08.80
FIR LANDESAMT FUER DATENVERARBEITUNG UND STATISTIK NRW, DUESSELDORF
DET
KAP

ABS NUR EIN RELATIV KLEINER TEIL DER LANGFRISTIG BETROFFENEN IST SICH
ABS DER ZUKUENFTIGEN BEDEUTUNG DER DATENKOMMUNIKATION UND DER
ABS SCHLUESSELFUNKTION DER NETZWERKKONZEPTE BEWUSST. NEBEN HERSTELLER-
ABS SPEZIFISCH GEPRAEGTEN RECHNERNETZKONZEPTEN SIND HERSTELLERUNAB-
ABS HAENGIGE KONZEPTE MOEGLICH, DIE DEM ANWENDER LANGFRISTIG EINIGE
ABS ERHEBLICHE VORTEILE BIETEN. DER FOLGENDE BEITRAG ENTHAELT EINIGE
ABS ARGUMENTE ZUR AKTUELLEN DISKUSSION UND SOLL UNTER VERZICHT AUF
ABS TECHNISCHE DETAILS IN DIE GESAMTPROBLEMATIK EINFUEHREN.
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NUM 21
TIT WAS IST EIN VIRTUELLES NETZ?
AUT C. RULAND
QUE ELEKTRONISCHE RECHENANLAGEN, 1981, HEFT 3, S.134-136
KEY VIRTUELLES NETZ - FREIES NETZ - LASTAUSGLEICH - ROUTING
KEY EIN NETZ DAS DIEDATENVERBINDUNGEN UND KNOTEN EINES TEILNETZES
KEY DES FREIEN NETZES ALS UBERTRAGUNGSMEDIUM BENUTZT, WIRD V N GENANNT
DAT 03.81
FIR AEG-TELEFUNKEN, KONSTANZ
DET
KAP

ABS DAS KONZEPT DER VIRTUELLEN NETZE ERWEITERT DAS BESTEHENDE LEI-
ABS STUNGSANGEBOT VON NETZWERKEN, OHNE SPEZIELLE ANFORDERUNGEN AN DEN
ABS NETZZUGANG ZU STELLEN. EIN NETZ, DAS DIE DATENVERBINDUNGEN UND
ABS KNOTEN EINES TEILNETZES DES FREIEN NETZES ALS UEBERTRAGUNGSMEDIUM
ABS BENUTZT, WIRD ALS VIRTUELLES NETZ BEZEICHNET.
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NUM 22
TIT ROUTING IN VIRTUELLEN NETZEN
AUT C. RULAND
QUE ELEKTRONISCHE RECHENANLAGEN, 1981, HEFT 4, S.164-167
KEY ROUTING - FREIES NETZ - VIRTUELLES NETZ - NETCHANGEPROTOKOLL
KEY ROUTINGVERFAHREN - ARPANET - NETCHANGEMESSAGE
KEY
DAT 01.81
FIR AEG-TELEFUNKEN, KONSTANZ
DET HOT POTATO HEURISTIC ROUTING DOCTRINE
KAP

ABS EINEM GEGEBENEN NETZWERK WERDEN MEHRERE VIRTUELLE NETZE UEBERLAGERT
ABS IN DENEN JEWEILS EIN EIGENES ROUTING DURCHGEFUEHRT WIRD. ES WIRD
ABS EIN ADAPTIVES ROUTINGVERFAHREN BESCHRIEBEN, DAS GLEICHZEITIG FUER
ABS JEDES VIRTUELLE NETZ DEN KUERZESTEN WEG ZWISCHEN ZWEI KNOTEN LIE-
ABS FERT. DER ALGORITHMUS IST UNABHAENGIG VON DER TOPOLOGIE UND DER
ABS ANZAHL DER VIRTUELLEN NETZE SOWIE DER ART IHRER UEBERLAGERUNG UND
ABS GEGENSEITIGEN UEBERLAPPUNG.
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NUM 23
TIT HERMES DATENKOMMUNIKATIONSSYSTEM DER EUROPAEISCHEN EISENBAHNEN
AUT M.KUBITZ
QUE PROC TELECOM '81
KEY
KEY
KEY
DAT 01.80
FIR SESA-DEUTSCHLAND, FRANKFURT
DET
KAP ---

ABS DURCH DIE AUF INTERNATIONALER EBENE VON DER UIC GENORMTEN UND VON
ABS ALLEN AN DAS HERMES-SYSTEM ANGESCHLOSSENEN BAHNGESELLSCHAFTEN EIN-
ABS ZUHALTENDEN STANDARDS WIE HOEHERE PROTOKOLLE UND TRANSPORTSTATION
ABS SOWIE MIT VORHANDENSEIN EINES DER CCITT-EMPFEHLUNG X.25 ENTSPRE-
ABS CHENDEN DATENPAKETVERMITTLUNGSNETZES IST ES MOEGLICH, IM INTERNATI-
ABS ONALEN DATENAUSTAUSCH DER EUROPAEISCHEN BAHNGESELLSCHAFTEN DIE IN-
ABS KOMPATIBILITAETEN DER HERSTELLERABHAENGIGEN SYSTEMARCHITEKTUREN UND
ABS IHRER SPEZIFISCHEN HOEHEREN PROTOKOLLE ZU UEBERWINDEN. DIE GEWAEHL-
ABS TEN FORMEN DER ANPASSUNG ERMOEGLICHEN EIN INTERNATIONALES VERBUND-
ABS SYSTEM OHNE AENDERUNG DER SYSTEMSOFTWARE DER NATIONALEN RECHNERSY-
ABS STEME ALLER BAHNGESELLSCHAFTEN. FERNER KANN IM HERMES-VERMITLLUNGS-
ABS NETZ JEDERZEIT DIE ANZAHL DER VERMITTLUNGSKNOTEN GEAENDERT WERDEN,
ABS DIE LEITUNGSGESCHWINDIGKEITEN MODIFIZIERT UND DIE ANZAHL DER ANGE-
ABS SCHLOSSENEN BAHNGESELLSCHAFTEN ERHOEHT WERDEN, OHNE DEN ZU DEM JE-
ABS WEILIGEN ZEITPUNKT HERRSCHENDEN VERBUND ZU BEEINTRAECHTIGEN.

NUM 24
TIT WAS IST X.25
AUT W. TIETZ
QUE ELEKTRONISCHE RECHENANLAGEN
KEY HDLC - PAKETVERMITLLUNG - LAP A - LAP B - PAKETFORMATE
KEY
KEY
DAT 03.79
FIR DEUTSCHE BUNDESPOST, DARMSTADT
DET LAP A - LAP B
KAP 2.2.7.2

ABS BEI X.25 HANDELT ES SICH UM EINE NORM, DER EIN PAKETVERMITTELTES
ABS DATENNETZ ALS VEREINBARUNG BEDARF, UM EIN SINNVOLLES ZUSAMMENWIR-
ABS KEN DER SYSTEMKOMPONENTEN ZU GEWAEHRLEISTEN. DIE ARBEIT BESCHREIBT
ABS DIE STRUKTUR DIESER NORM, DIE ALS EMPFEHLUNG DER CCITT ENTSTANDEN
ABS IST. X.25 REGELT DIE BEDINGUNGEN UND DEN ABLAUF EINER DATENUEBER-
ABS MITTLUNG BIS ZUR EBENE 3 DER VON DER ISO FESTGELEGTEN PROTOKOLL-
ABS HIERARCHIE. DARUEBERHINAUS SIND HOEHERE PROTOKOLLE ERFORDERLICH.
ABS DIESE STRUKTUR IST FUER DATENPAKETVERMITTLUNGSNETZE ENTWICKELT
ABS WORDEN, DIE IN VIELEN LAENDERN DER ERDE ZUM EINSATZ KOMMEN
ABS (AUCH IM BEREICH DER DBP).
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NUM 25
TIT A COMPARISON OF FOUR X.25 PUBLIC NETWORK INTERFACES
AUT M.L. HESS; M. BRETHES; A. SAITO
QUE ---
KEY DATAPAC - DDX - TELENET - TRANSPAC - X.25 - CCITT - LAP - LAPB -
KEY
KEY
DAT 01.79
FIR IBM SYSTEM COMMUNICATIONS DIVISION, USA - FRANCE
DET X.25 DETAILS
KAP 2.2.7.2

ABS CCITT RECOMMENDATION X.25 HAS BEEN SELECTED BY SOME TELECOMMUNI-
ABS CATION ORGANIZATIONS AS ONE OF THEIR PACKET NETWORK USER INTER-
ABS FACE. FOUR OF THESE NETWORKS ARE EITHER IN OPERATION OR SPECIFIED
ABS IN ENOUGH DETAIL TO ALLOW A COMPARISON. DIFFERENCES AMONG THE
ABS FOUR NETWORKS AT THE USER INTERFACE AND IN THEIR OPERATIONAL
ABS CHARACTERISTICS ARE PRESENTED AND DISCUSSED. THE MANY SIMILARITIES
ABS AMONG THE NETWORKS ARE IMPLICITLY ACKNOWLEDGED BUT NOT STRESSED.
ABS THE POINT OF VIEW IS THAT OF A DESIGNER WISHING TO DEVELOP A DTE
ABS CAPABLE OF ATTACHMENT TO AN X.25 INTERFACE.
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NUM 26
TIT EIN JAHR DATEX-P
AUT W. TIETZ
QUE
KEY PAKETVERMITTELTES DATENNETZ
KEY
KEY
DAT 09.81
FIR FTZ, DARMSTADT
DET BENUTZERANZAHL
KAP

ABS DER ARTIKEL BESCHREIBT DEN AKTUELLEN STAND (SEP.81) DES DATEX-P
ABS NETZES DER DEUTSCHEN BUNDESPOST.
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NUM 27
TIT DATA ANALYSIS AT LAMPF: A HIERARCHICAL APPROACH
AUT D.G. PERRY; D.C. SPARKS
QUE IEEE TRANSACTIONS ON NUCLEAR SCIENCE, 1979, HEFT 4, S.4572-4579
KEY XNET - FILE SHIPPING - JOB SHIPPING - MESSAGE PASS-THROUGH
KEY FUNCTIONS - GATEWAYS
KEY DECNET,PDP-11-VAX
DAT 08.79
FIR LOS ALAMOS SCIENTIFIC LABORATORY, LOS ALAMOS
DET ---
KAP ---

ABS THE DEVELOPMENT OF DATA ANALYSIS AT LAMPF EVOLVED TO PROVIDE A
ABS HIERARCHY OF DATA-ANALYSIS CAPABILITY. THIS CAPABILITY RANGES
ABS FROM DATA-ACQUISITION COMPUTERS (WHEN NOT IN USE FOR DATA-
ABS ACQUISITION), LARGE MINICOMPUTERS, SUPER MINICOMPUTERS, AND LARGE
ABS COMPUTERS SUCH AS THE CDC-7600 OR CRAY-1. THIS HIERARCHY OF
ABS CAPABILITY ALLOWS ONE TO ANALYSE DATA IN THE MOST COST-EFFECTIVE
ABS MANNER. THE CONNECTION TO THE LASL CENTRAL COMPUTING FACILITY
ABS (CCF) WILL BE THROUGH XNET, AN EXTENDED NETWORK LINKING REMOTE
ABS SITES TO THE CCF. XNET, ALONG WITH A PROPOSED LOCAL NETWORK, WILL
ABS BE DESCRIBED.
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NUM 28
TIT MEASURED PERFORMANCE OF AN ETHERNET LOCAL NETWORK
AUT J.F. SHOCH; J.A. HUPP
QUE COMMUNICATIONS OF THE ACM, 1980, HEFT 23, S.711-721
KEY NORMAL/HIGH LOAD-STABILITY-FAIRNESS-CSMA/CD-INTER/INTRANET TRAFFIC
KEY MEASUREMENTS-OVERALL TRAFFIC CHARACTERISTICS-UTILIZATION-PACKET
KEY LENGTH-SOURCE DEST TRAFFIC PATTERN-INTER PACKET ARRIVAL TIME
DAT 12.80
FIR XEROX PALO ALTO RESEARCH CENTER
DET ETHERNET PERFORMANCE
KAP 3.2

ABS THE ETHERNET COMMUNICATIONS NETWORK IS A BROADCAST, MULTIACCESS
ABS SYSTEM FOR LOCAL COMPUTER NETWORKING, USING THE TECHNIQUES OF
ABS CARRIER SENSE AND COLLISION DETECTION. RECENTLY, WE HAVE MEASURED
ABS THE ACTUAL PERFORMANCE AND ERROR CHARACTERISTICS OF AN EXISTING
ABS ETHERNET INSTALLATION WHICH PROVIDES COMMUNICATIONS SERVICES TO
ABS OVER 120 DIRECTLY CONNECTED HOSTS. THIS PAPER IS A REPORT ON SOME
ABS OF THOSE MEASUREMENTS-CHARACTERIZING TYPICAL TRAFFIC CHARACTERISTIC
ABS IN THIS ENVIRONMENT AND DEMONSTRATING THAT THE SYSTEM WORKS VERY
ABS WELL. ABOUT 300 MILLION BYTES TRAVERSE THE NETWORK DAILY; UNDER
ABS NORMAL LOAD, LATENCY AND ERROR RATES ARE EXTREMELY LOW AND THERE
ABS ARE VERY FEW COLLISIONS. UNDER EXTREMELY HEAVY LOAD - ARTIFICIALLY
ABS GENERATED - THE SYSTEM SHOWS STABLE BEHAVIOUR, AND CHANNEL UTILI-
ABS ZATION APPROACHES 98 PERCENT, AS PREDICTED.
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NUM 29
TIT KONZEPTE UND BEWERTUNGSMETHODEN FUER LOKALE RECHNERNETZE
AUT O. SPANIOL
QUE PROC. ONLINE '82 DUESSELDORF, 1H
KEY RING-BUS-SLOTTED RING-TOKEN RING-KONFLIKTBEREINIGUNG-ADAPTIVE VERZO
KEY AUSWAHLTECHNIKEN-POLLING-RANDOM ACCESS METHODEN-RESERVIERUNGSTECHNI
KEY MISCHFORMEN-CSMA/LBT-NON-1-P-PERSISTENT-PRIORITATEN-KONFLIKTFREIE
DAT 02.82
FIR UNI FRANKFURT
DET ACCES TECHNIQUE
KAP 2.2.6

ABS A COMPARATIVE DISCUSSION OF TOPOLOGICAL ALTERNATIVES AND LOW
ABS LEVEL PROTOCOLS FOR LOCAL COMPUTER NETWORKS IS PRESENTED.
ABS SPECIAL EMPHASIS IS LAID ON AN EVALUATION AND COMPARISON OF RING
ABS CONFIGURATIONS AND BUS STRUCTURES.
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NUM 30
TIT HYPERCHANNEL ALS GLOBALVERBINDUNG UNTERSCHIEDLICHER RECHNERSYSTEME
AUT M. KRANZ
QUE PROC ONLINE'82, DUESSELDORF, 2H
KEY DAS TRUNK INTERFACE-DIE STEUERLOGIK-DER MIKROPROZ-DAS GERATE-INTERF
KEY DATENFLUSS-UBERTRAGUNGSPROTOKOLL-TRUNKBELEGUNG-DIE NACHRICHT-
KEY HC SOFTWARE-FUNKTIONELLE BESCHR DES HC DRIVERS-ANWENDUNGEN-ABBLDGEN
DAT 02.82
FIR TESDATA, FRANKFURT
DET HYPERCHANNEL ADAPTOR
KAP 3.1.1

ABS INHALTSVERZEICHNIS:
ABS
ABS 1. NETZWERKE - VERSUCH EINER TRENDBESCHREIBUNG
ABS 2. DER HYPERCHANNEL
ABS 2.1 HYPERCHANNEL-ARCHITEKTUR
ABS 2.2 FUNKTIONSWEISE DES HYPERCHANNELS
ABS 2.3 DIE HYPERCHANNEL-SOFTWARE
ABS 3. ANWENDUNGEN MIT HYPERCHANNEL
ABS 4. ABBBILDUNGEN
ABS 5. ANHANG - ADAPTERMODELLE
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NUM 31
TIT LEISTUNGSVERGLEICH LOKALER NETZE FUER DIE DIGITALE ...
AUT J. SWOBODA
QUE PROC ONLINE '82, DUESSELDORF, 3H
KEY BUS/RING-PABX-SYSTEME - VERWEILZEITEN - MULTIPLEXEN-
KEY LEISTUNGSANFORDERUNGEN-STANDARDS-DIKOS ALS BEISPIEL-
KEY TDM-ZEITMULTIPLEX
DAT 02.82
FIR AEG TELEFUNKEN, ULM
DET DIKOS-TDM
KAP 2.2.5

ABS ES WERDEN BUS- UND RINGSYSTEME EINERSEITS UND DIGITALE FERNSPRECH-
ABS NEBENSTELLENANLAGEN (PABX) ANDERERSEITS IM HINBLICK AUF DIGITALE
ABS KOMMUNIKATIONSDIENSTE VERGLICHEN. ES ZEIGT SICH, DASS EIN WEITES
ABS FELD DER KOMMUNIKATIONSDIENSTE VON BEIDEN LOESUNGEN GLEICH GUT AB-
ABS GEDECKT WERDEN KANN. DARUEBER HINAUS SIND SYSTEMBEDINGT DER MASSEN-
ABS FERNSPRECHDIENST EINE DOMAENE VON PABX-SYSTEMEN UND DER DATENVER-
ABS KEHR MIT KURZZEITIG SEHR HOHER BITRATE EINE DOMAENE VON BUS/RING-
ABS SYSTEMEN. DIE IN ENTWURFS- UND DISKUSSIONSPHASE BEFINDLICHEN STAN-
ABS DARDS VON SCHNITTSTELLEN UND PROTOKOLLEN FUER DIE DIENSTINTEGRIERTE
ABS KOMMUNIKATION WERDEN GROB UMRISSEN. VON DIKOS, EINEM BEISPIEL EINES
ABS ANPASSBAREN LOKALEN BUSSYSTEM, WERDEN EINIGE LEISTUNGSEIGENSCHAFTEN
ABS DISKUTIERT.
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NUM 32
TIT NETZWERK-DESIGN UND LEISTUNGSSPEKTRUM VON ETHERNET
AUT K. SPIEGEL
QUE PROC ONLINE '82, DUESSELDORF, 4H
KEY KURZFASSUNG ETHERNET
KEY BLOCKDIAGRAM DES KONTROLLERS
KEY
DAT 02.82
FIR RANK XEROX, DUESSELDORF
DET ITP-COURIER
KAP 3.2.1

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NUM 34
TIT MEDIA - EIN DEZENTRALES SYSTEM ZUR LOKALEN KOMMUNIKATION MIT ...
AUT E. KNAPP
QUE PROC ONLINE '82, DUESSELDORF, 6H
KEY ANFORDERUNGEN AN EIN LAN-RINGSYSTEM SILK-IDA-
KEY
KEY
DAT 02.82
FIR DIETZ COMPUTER SYSTEME, MUELHEIM
DET SILK
KAP 2.1 - 2.3- 3.5.5

ABS DER VORLIEGENDE BEITRAG VERSUCHT, DIE WESENTLICHEN MERKMALE EINES
ABS LOKALEN NETZES HERAUSZUARBEITEN UND STELLT DARAUF AUFBAUEND DAS
ABS SYSTEM MEDIA VOR, EINE INTEGRIERTE LOESUNG FUER EINEN LOKALEN
ABS KOMMUNIKATIONS- UND ORGANISATIONSVERBUND. DAS NACHRICHTENVERTEIL-
ABS SYSTEM IDA IST EIN BEISPIEL EINER APPLIKATIONSORIENTIERTEN ERWEI-
ABS TERUNG DES BASISSYSTEMS MEDIA, INSBESONDERE IM HINBLICK AUF DIE
ABS ASPEKTE ORGANISATIONSVERBUND UND DIE BESONDEREN BETRIEBSANFORDERUN-
ABS GEN, DENEN MEDIA GENUEGT.
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NUM 35
TIT ANSCHLUSS LOKALER RECHNERNETZE AN OEFFENTLICHE DATENNETZE(HMINET 2)
AUT B. BUTSCHER
QUE PROC ONLINE'82, DUESSELDORF, 7H
KEY HMINET1-HMINET2-DATEX-P-P10-P20-P32-P33-X.25-X.75-DIALOGUE SERVICES
KEY PAD-FILE TRANSFER(FT)-REMOTE DATA ACCESS(RDA)-VIRTUAL FILE SYS(VF)
KEY MAD SERVICE(NETWORK MESSAGE & ADMINISTRATION)
DAT 02.82
FIR HAHN-MEITNER-INSTITUT, BERLIN
DET DATEX-P X.25
KAP 3.3.2

ABS THE EXISTENCE OF PUBLIC DATA NETWORKS AND THE INCREASING NUMBER OF
ABS LOCAL AREA NETWORKS REQUIRES A SOLUTION FOR THE NETWORK INTER-
ABS CONNECTION PROBLEM. THE PAPER DESCRIBES POSSIBLE INTERCONNECTION
ABS MECHANISMS AND GIVES A SOLUTION FOR THE INTERCONNECTION OF THE
ABS GERMAN PUBLIC DATA NETWORK DATEX-P AND THE LOCAL X.25 NETWORK
ABS HMINET 2. HMINET 2 IS A STARSHAPED LOCAL AREA COMPUTER NETWORK IN
ABS THE ENVIRONMENT OF A NUCLEAR RESEARCH INSTITUTE AND CONNECTS ABOUT
ABS 24 HOST COMPUTERS. SERVICES AVAILABLE FOR THE INHOUSE USER ARE:
ABS DIALOGUE SERVICE (PAD), REMOTE DATA ACCESS AND FILE TRANSFER
ABS (RDA/FT) AND A NETWORK ADMINISTRATION AND MESSAGE SERVICE. THE
ABS SWITCHING NODE OPERATES AS A 'PRIVATE AUTOMATIC DATA EXCHANGE'
ABS (PADX) CONNECTED TO DATEX-P.
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NUM 36
TIT LAN AND THE ISO REFERENCE MODEL OF OPEN SYSTEMS INTERCONNECTION
AUT T. JACOBSEN
QUE PROC ONLINE '82, DUESSELDORF, 8H
KEY MARKET SEGMENTS:-HIH SPEED LOCAL BROADBAND SERVICES-HIGHSEED LAN
KEY LOW SPEED LOCAL INTEGRATED SERVICES-TECHNOLOGY:-BASE/BROAD LAN-
KEY STANDARDS-GATEWAYS-AUTOMATED OFFICE-ISO REFERENCE MODEL
DAT 02.82
FIR NCR SOFTWARE ENGINEERING, KOPENHAGEN
DET MARKET
KAP 2.1

ABS THE DEFINITION OF LAN, AS GIVEN BY AN ISO AD-HOC COMMITTEE, IS
ABS CRITISIZED. INSTEAD, SOME TECHNICAL TERMS, UPON WHICH A DEFINITION
ABS MAY BE BASED IS GIVEN, AND THREE AREAS OF SCOPE FOR LAN'S ARE
ABS DEALT WITH. SOME MARKET SEGMENTS ESPECIALLY FOR HIGH-SPEED LOCAL
ABS BROADBAND COMMUNICATION SERVICES ARE GIVEN. TECHNIQUES FOR LAN'S
ABS ARE PRESENTED, AND THE DIFFERENCES IN THEIR APPLICABILITY ARE
ABS POINTED OUT. ARCHITECTURES FOR OFFICE AUTOMATION, AND GATEWAYS FOR
ABS PUBLIC NETWORKS ARE DISCUSSED.
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NUM 37
TIT ETHERNET - EIN LOKALES NETZWERK
AUT H. HARDINGHAUS
QUE PROC TELECOM '81, KOELN, S.372-384
KEY BURO-EDV-CSMA/CD-GESICHTSPUNKT-SEGMENT-TREND-GESCHWINDIGKEIT
KEY VERBINDUNG-NETZWERK-EIGENSCHAFTEN-ANWENDERANFORDERUNG-
KEY
DAT 11.81
FIR RANK XEROX, DUESSELDORF
DET ETHERNET
KAP 3.2.1

ABS ETHERNET IST DIE VERBINDUNG VON BUEROGERAETEN WIE MIKROCOMPUTERN
ABS UND KOPIERERN, UM SIE Z.B. MIT TEXTVERARBEITUNGSANLAGEN UND ELEK-
ABS TRONISCHEN DRUCK- UND ARCHIVIERUNGSSYSTEMEN KOMMUNIZIEREN ZU
ABS LASSEN. DER VORLIEGENDE AUFSATZ BESCHAEFTIGT SICH MIT DEN ZIEL-
ABS SETZUNGEN UND DER KONZEPTION VON ETHERNET.
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NUM 38
TIT SILK - SYSTEM FUER INTEGRIERTE LOKALE KOMMUNIKATION
AUT M. HOCHRAUTENER
QUE PROC TELECOM '81, KOELN, S.385-392
KEY RING-KOAX ODER LICHT-DATEN UND SPRACH-LOKALBLOCK-HAUPTBLOCK-X.21
KEY V.24-LEITUNGSVERMITTLUNG-DATEX-P-X.25-DATEX-L-X.21-PILOTPROJEKTE-
KEY DEUTSCHE WELLE-FERNSEHSTUDIO
DAT 11.81
FIR HASLER, BERN
DET ---
KAP 3.5.5-2.3

ABS SILK IST EINE AUS WENIGEN BAUSTEINTYPEN AUFGEBAUTE UEBERTRAGUNGS-
ABS UND VERMITTLUNGSEINRICHTUNG FUER DIE INTEGRIERTE LOKALE DATEN- UND
ABS SPREACHKOMMUNIKATION. DER AUFSATZ BESCHREIBT DAS RINGFOERMIGE,
ABS MODULARE UND DEZENTRAL AUFGEBAUTE BUSSYSTEM UND GIBT EINIGE
ABS KONKRETE ANWENDUNGSBEISPIELE.
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NUM 39
TIT DAS DIGITALE KOMMUNIKATIONSSYSTEM DIKOS
AUT A. REIM
QUE PROC TELECOM '81, KOELN, S.393-410
KEY ZEITMULTIPLEX-ZENTRALE BUSSTATION ZBS-MASTER CLOCK STSTION-TDM
KEY DEZENTRALE BUS STATION DBS-LINIENNETZ-VERZWEIGUNGSNETZ-LICHTLEITER
KEY FERNSPRECH-DATEN-ZEITKANAL-SYNC REFLEX-SENDE/EMPFANGSLEITUNG
DAT 11.81
FIR AEG-TELEFUNKEN, BACKNANG
DET TDM
KAP 2.3 -2.2.5

ABS DAS DIGITALE KOMMUNIKATIONSSYSTEM DIKOS IST EIN NACHRICHTENSYSTEM
ABS MIT DEZENTRALER DURCHSCHALTUNG FUER DATEN- UND SPRACHINFORMATIONEN.
ABS DIE WESENTLICHEN MERKMALE DIESES SYSTEMS WERDEN VORGESTELLT UND
ABS EIN BESONDERS TYPISCHES BEISPIEL AUS DER VIELZAHL DER MOEGLICHEN
ABS ANWENDUNGSGEBIETE GENAUER DARGESTELLT.
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NUM 40
TIT NET/ONE - EIN ETHERNET-KOMPATIBLES LOKALES DATENKOMMUNIKATIONSSYSTE
AUT A. DAERR
QUE PROC TELECOM '81, KOELN, S.411-418
KEY NIU-RS232C-8BIT PARALEL-IEEE 488-ETHERNET-CSMA/CD-NCF-NDS-CP/M 2.2
KEY NETWORK CONFIG/DEVELOPMENT- 3 APPLIC PROCESSOR BOARDS-X-ON/X-OFF
KEY FLOPPY-ZILOG RIO-VIRTUAL CIRCUIT-DATAGRAM-32 BIT DMA SCHNITTSTELLE
DAT 11.81
FIR KONTRON ELEKTRONIK, ECHING
DET NET/ONE
KAP 3.2.3

ABS NET/ONE IST EIN LOK NETZWERKSYS DAS EINE REIHE VON STANDARD
ABS SCHNITTSTELLEN (RS232C-8 BIT PARALLEL- IEEE 4888) UNTERSTUTZT
ABS UND DESHALB DEN ANSCHLUSS VERSCHIEDENER GERATETYPEN (TERMINAL-HOST
ABS RECHNER-DRUCKER-PLOTTER)AUCH UNTERSCHIEDLICHER HERSTELLER IN EINEM
ABS VERBUND ERLAUBT. DIE VOLLSTANDIG ETHERNET-KOMPATIBLE VARIANTE
ABS ARBEITET MIT 10 MBIT/S. DIE EIGENTLICHE SCHNITTSTELLE ZWISCHEN DEM
ABS NETZ UND DEN ANGESCHLOSSENEN GERATEN BILDET DIE NETZWERKSTATION
ABS NIU (NETWORK INTERF UNIT) AUF ZILOG Z80 BASIS. ES IST FUR JEDE
ABS INSTALLATION JEWEILS EINE VERWALTUNGSSTATION NOTWENDIG, DIE NCF
ABS (NETW CONFIG FAC) ODER NDS (NETW DEVELOPMENT STATION). NET/ONE
ABS STELLT ZWEI LEISTUNGFAHIGE PROTOKOLLE ZUR VERFUGUNG: DIE VIRTUELLE
ABS VERBINDUNG UND DAS DATAGRAM. IMPLEMENTIERUNGEN: FIRMA KONTRON(ECHIN
ABS ZUR VERBINDUNG MIKRO+MINIS,TERMINALS,PERIPHS,ANALOGDATEN-PROZESSOR
ABS TH LAUSANNE/SCHWEIZ: 50 NIU-S.
ABS NCF= NIU MODELL2+2 TERMINAL+NETW STORAGE MODUL MIT 2 FLOPPYS

NUM 41
TIT "LOCAL AREA NETWORK"
AUT G. DARAZS
QUE PROC TELECOM '81, KOELN, S.419-427
KEY WARUM LAN-WAS IST EIN LAN-INFORMATION/GESELLSCHAFT-MEDIEN-STEUERUNG
KEY MERKMALE-WANG BAND-VERBINDUNGSBAND-EINSATZBEISPIEL-NUTZBAND-
KEY BREITBAND-BURO DER ZUKUNFT-
DAT 11.81
FIR WANG DEUTSCHLAND, FRANKFURT
DET ---
KAP 3.4.1 - 2.1 - 2.2

ABS DREH- UND ANGELPUNKT DER BUEROKOMMUNIKATION IST DIE KOMMUNIKATION,
ABS IM EMPFANGEN VON INFORMATIONEN SOWIE AUCH IM VERTEILEN VON INFO.
ABS WEITERE ASPEKTE SIND DIE ZEITASPEKTE, DER OERTLICHE UND DER OEKO-
ABS NOMISCHE ASPEKT. INHAUSNETZE BIETEN MOEGLICHKEITEN ZU WIRTSCHAFT-
ABS LICH VERTRETBAREN AUFWENDUNGEN, UM EIN GROSSES UEBERBETRIEBLICHES
ABS NETZ AUFZUBAUEN, DAS MIT OEFFENTLICHEN KOMMUNIZIEREN KANN. VON DER
ABS GRUNDIDEE HER STELLEN INHAUSNETZE EINEN LOGISCHEN SCHRITT IN DER
ABS EVOLUTION DES INFORMATIONSMANAGEMENTS IM BUERO DAR, UM VIELE, AUCH
ABS VERSCHIEDENARTIGE BUEROGERAETE IN EINEM EINZIGEN GROSSEN NETZWERK
ABS MITEINANDER ZU VERBINDEN. WEIL DIESE GERAETE UNTEREINANDER KOMMU-
ABS NIZIEREN KOENNEN, VERBESSERT SICH DER INFORMATIONSAUSTAUSCH DER
ABS BUEROS ERHEBLICH. DIE INHAUSNETZE BRINGEN DIE INFORMATIONEN BESSER
ABS ALS ES HEUTE MOEGLICH IST, ALSO SCHNELLER, SICHERER UND VIELLEICHT
ABS PROBLEMLOSER AN DEN MENSCHEN HERAN.
ABS

NUM 42
TIT PILOTPROJEKT IDA: INHOUSE-KOMMUNIKATION MIT DEZENTRALER TECHNIK
AUT W. HACK
QUE PROC TELECOM '81, KOELN, S.428-435
KEY DEUTSCHE WELLE PRESSEAGENTUR-SILK RING-AUFGABENSTELLUNG-DIETZ-
KEY ZEITMULTIPLEX-BUFFER INSERTION-WAHLNETZ
KEY
DAT 11.81
FIR GES F PROZESSSTEUERUNGS- U INFORMATIONSSYSTEME, PSI, ASCHAFFENBURG
DET ---
KAP 2.3 - 3.5

ABS DER BEITRAG BERICHTET VON EINER DER ERSTEN GROESSEREN ANWENDUNGEN
ABS MODERNER BUS-SYSTEME FUER DEN LOKALEN BEREICH. DABEI WIRD DIE
ABS ARCHITEKTUR DES GESAMTSYSTEMS DARGESTELLT UND AUF DEN KOMMUNIKA-
ABS TIONSTEIL NAEHER EINGEGANGEN. WESENTLICHSTES MERKMAL DIESES SYSTEMS
ABS IST SEIN DURCHWEG DEZENTRALER AUFBAU. ER ERLAUBT DEN EINSATZ RELA-
ABS TIV EINFACHER SYSTEMBAUSTEINE ZUR ERFUELLUNG HOECHSTER ANSPRUECHE
ABS AN LEISTUNG UND AUSFALLSICHERHEIT. ZUDEM LASSEN SICH SOLCHE SYSTEME
ABS AUF EINFACHE WEISE STUFENLOS ERWEITERN ODER DURCH UMVERTEILUNG
ABS PRAKTISCH OHNE KOSTEN AN NEUE BETRIEBSVERHAELTNISSE ANPASSEN. SIE
ABS ZEICHNET ALSO EIN HOHES MASS AN FLEXIBILITAET AUS.
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NUM 44
TIT K(OMMUNIKATIONS)-ANLAGEN, BENUTZUNGSRECHTLICHE ASPEKTE
AUT M. ADELMANN
QUE PROC TELECOM '81, KOELN, S.441-448
KEY IN HOUSE NETZ-TARIF-REGELUNG
KEY
KEY
DAT 11.81
FIR BUNDESPOSTMINISTERIUM, BONN
DET ---
KAP ---

ABS DER AUFSATZ VERSUCHT, DIE EINSTELLUNG DER DBP ZUM THEMA
ABS KOMMUNIKATIONS-ANLAGE AUFZUZEIGEN. DABEI BESCHRAENKT ER SICH
ABS AUF BENUTZUNGSRECHTLICHE ASPEKTE.
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NUM 45
TIT RECHNERNETZWERKE - SYSTEME, PROTOKOLLE UND DAS ISO-ARCHITEKTURMOD.
AUT H. KERNER; G. BRUCKNER
QUE SPRINGER-VERLAG WIEN-NEW YORK, 1981
KEY ---
KEY
KEY
DAT 06.81
FIR TECHNISCHE UNIVERSITAET WIEN
DET ---
KAP 2

ABS 2.1 CODIERUNGS/MODULIERUNGSARTEN; SPEKTRUM; PULSE CODE MODULATION
ABS SATELLITENUEBERTRAGUNG; OPTISCHE GLASFASERLEITUNGEN
ABS 2.2 SIMPLEX/DUPLEX/HALBDUPLEX/SERIELL/PARALLEL/SYNCHRON/ASYNCHRON
ABS PUNKT ZU PUNKT; MEHRPUNKT; PROTOKOLL; MODEMS; LEITUNGSARTEN;
ABS GUETE DER UEBERTRAGUNG
ABS 3.1 STEUERCODES; BESCHREIBUNG REALER PROTOKOLLE; BSC; ZUSTANDS-
ABS DIAGRAMME; HDLC; SDLC; DDCMP; PROTOKOLLVERGLEICH;EFFEKTIVE
ABS UEBERTRAGUNGSGESCHWINDIGKEIT
ABS 4.1 NETZTOPOLOGIE; VERMITTLUNGSARTEN; PRIVATE/OEFFENTLICHE NETZE;
ABS KONZENTRIEREN/MULTIPLEXEN/SCHALTEN; PRINZIPIEN:FDM/TDM
ABS 4.2 STAND/WAEHLLEITUNGEN;MODEMS;KOSTEN;MULTIPORT-MODEM;LINE-MULTI
ABS 4.3 ISO-MODELL;TRANSPORT/ANWENDERSYSTEM; PHYSICAL/LINK/NETWORK/
ABS TRANSPORT/SESSION/PRESENTATION LAYER;X.25;FREMDNETZANSCHLUSS
ABS 4.5 BROADCAST-SYSTEME; KOLLISIONEN: ALOHA/CSMA/RESERVIERUNGS-
ABS MECHANISMUS

NUM 46
TIT A DISTRIBUTED OFFICE SYSTEM BASED ON THE CAMBRIDGE RING(POLYNET)
AUT M.S. COLE; W.M. NEWMAN; D.C. SWEETMAN
QUE PROC IFIP TC-6 WORKING CONFERENCE, COMNET '81, BUDAPEST, S.73-82
KEY EMPTY SLOT-REPEATER-MONITOR STATION-MINI PACKET-VTS-100 WORKSTATION
KEY NAME SERVER-FILE SERVER-INTEL 8086-MULTIBUS-300MB-PROTOCOL-BBP-
KEY DOCUMENT SERVER-TIME-OF-DAY-SERVER-LOG-IN-SERVER-ACCESS LOGIC
DAT 05.81
FIR LOGICA VTS, LONDON
DET POLYNET
KAP 3.5.5

ABS THIS PAPER DESCRIBES A PROJECT TO DEVELOP A DISTRIBUTED OFFICE
ABS SYSTEM INCORPORATING WORD PROCESSING AND SHARED FILING FACILITIES,
ABS BASED ON THE CAMBRIDGE RING. THE WORK CAPITALISED ON THE EXISTANCE
ABS OF A WORKING STAND-ALONE WORD PROCESSOR (THE VTS-100) AND A PROVEN
ABS SET OF RING COMPONENTS. CHIEF AREAS OF FURTHER DEVELOPMENT WERE
ABS RING INTERFACE DESIGN, FILE SERVER DESIGN, PROTOCOLS AND USER-LEVEL
ABS EXTENSIONS. THE PAPER SUMMARIZES SOME OF THE CONSIDERABLE
ABS EXPERIENCE GAINED FROM THE DEVELOPMENT WORK.
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NUM 47
TIT REVIEW AND RE-ASSESSMENT OF ECNET, A PRIVATE NETWORK WITH OPEN ...
AUT A. HAAG; F. KOENIGSHOFER; P. QUOILIN
QUE PROC IFIP TC-6 WORKING CONFERENCE, COMNET '81, BUDAPEST, S.83-92
KEY
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KEY
DAT 05.81
FIR ECMWF READING, BERKS., UNITED KINGDOM
DET
KAP

ABS THE EUROPEAN CENTRE FOR MEDIUM-RANGE WEATHER FORECASTS (ECMWF) HAS
ABS TO HANDLE ON ITS TELECOMMUNICATIONS NETWORK (ECNET) A CONSIDERABLE
ABS VOLUME OF DATA. FOR THIS A NETWORK FRONT-END PROCESSOR (NFEP) HAS
ABS BEEN IMPLEMENTED, USING MANUFACTURER INDEPENDENT LAYERED PROTOCOLS,
ABS AND IN THE PRESENT PHASE, MEDIUM-SPEED LEASED LINES TO THE 17
ABS MEMBER STATES ARE GRADUALLY BEING INSTALLED AND PUT INTO OPERATION.
ABS THE PAPER SUMMARIZES THE DEVELOPMENT OF THE PROJECT AND DECISIONS
ABS ON ITS ARCHITECTURE AND THE SELECTED PROTOCOLS; IT ATTEMPTS A
ABS REVIEW IN THE LIGHT OF THE EXPERIENCE GAINED AND THE PRESENT STATE
ABS OF THINKING IN OPEN INTERCONNECTION OF (COMPUTER) SYSTEMS.
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NUM 48
TIT VIDEOTON NETWORK SYSTEMS GENERAL OVERVIEW
AUT P. RAJKI; R. SZENTES; Z. UJVARI
QUE PROC IFIP TC-6 WORKING CONFERENCE, COMNET '81, BUDAPEST, S.93-99
KEY
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DAT 05.81
FIR VIDEOTON, BUDAPEST
DET
KAP

ABS ADVANCED INFORMATION SYSTEMS ARE DISTRIBUTED, PROCESSING POWERS AND
ABS USER DEMANDS ARE GEOGRAPHICALLY DISPERSED. VIDEOTON NETWORK SYSTEMS
ABS (VNS) IS USED AS A DISTRIBUTED PRODUCTION INFORMATION CONTROL
ABS SYSTEM WITH MINICOMPUTER BASED INTERACTIVE DATA BASE APPLICATIONS
ABS IN VERSION 0. THE PAPER DEALS WITH THE COMMUNICATION SUBSYSTEM OF
ABS VNS VERSION 0 TO BE PUT INTO OPERATION IN 1981. PROJECT DESIGN
ABS CONSIDERATIONS, VNS ARCHITECTURE AND IMPLEMENTATION ARE DETAILED,
ABS FUTURE PLANS ARE ALSO OUTLINED.
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NUM 49
TIT A UNIVERSITY TELEPROCESSING SYSTEM BASED ON RIAD COMPONENTS
AUT M. BOHUS; K. DOMBOS; K. VARJU; A. SARA; T. DIAMANT; P. HUNYA
QUE PROC IFIP TC-6 WORKING CONFERENCE, COMNET '81, BUDAPEST, S.101-106
KEY
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DAT 05.81
FIR UNIVERSITY SZEGED, UNGARN
DET
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ABS A TELEPROCESSING SYSTEM CONNECTING 4 RIAD-COMPUTERS AND A TERMINAL
ABS NETWORK IS WORKING IN THE REGIONAL EDUCATIONAL COMPUTING CENTER AT
ABS UNIVERSITY OF SZEGED (SOUTH-EAST HUNGARY) SINCE 1978 PROVIDING
ABS SERVICES FOR OTHER EDUCATIONAL INSTITUTIONS AS WELL. IN THE PAPER
ABS THE APPLICATION FIELDS, THE HARDWARE AND SOFTWARE COMPONENTS, THE
ABS SYSTEM ARCHITECTURE AND EXPERIENCES ARE PRESENTED. A SPECIAL
ABS ATTENTION IS PAID TO THE COMMUNICATION CONTROL SOFTWARE DEVELOPED
ABS BY THE LABORATORY OF CYBERNETICS OF JATE.
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NUM 50
TIT RECHNERVERBUNDSYSTEME - OFFENE KOMMUNIKATIONSSYSTEME AUF ...
AUT P. SCHMITZ; U. HASENKAMP
QUE HANSER, MUENCHEN - WIEN, 1981
KEY SYNCHRON/ASYNCHRON-DUE/DTE-DIENSTPROTOKOLL-HDLC-LASTVERBUND-X.25
KEY MULTIPLEX-NETZWERK-PAD-PIX-ISO/OSI-RJE-SCHICHT-SPEICHERVERMITTLUNG
KEY START/STOP-SNA-TRANSDATA-TRANSPORT-STANDLEITUNG-V.24-WAHLLEITUNG
DAT 01.81
FIR UNIVERSITAET KOELN
DET UBER ALLES
KAP 2. ENTLANG

ABS 2.2 MEDIEN;SIGNALFORM;UEBERTRAGUNGSBREITE;GESCHWINDIGKEITSMASSE;
ABS   LEITUNGSSCHALTUNG;VERMITTLUNGSART
ABS 5.3 REFERENZMODELL DER ISO;GROBE BESCHREIBUNG
ABS 6.0 PROTOKOLLE;PIX-RJE-PROTOKOLL;X.25;HDLC;MSV2;V.24;X.21;
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NUM 51
TIT LOCAL AREA NETWORKS OVERVIEW - PART2: STANDARD ACTIVITIES
AUT J.M. KRYSKOW;C.K. MILLER
QUE COMPUTER DESIGN, 1981, HEFT 3 (MAERZ), S.12-20
KEY PROWAY-IEEE 802-DIX ETHERNET-RELIABILITY-REALTIME CONTROL-
KEY FLOW CONTROL-BROADCAST-CSMA/CD-TOKEN ACCESS
KEY
DAT 03.81
FIR CONCORD DATA SYSTEMS, LEXINGTON, USA
DET PROWAY-IEEE 802-DIX ETHERNET
KAP 6

ABS TWO STANDARD BODIES AND A 3-COMPANY COMBINE (DIX) ARE ALL ATTEMPT-
ABS ING TO GENERATE STANDARDS, OR IN THE CASE OF DIX, ESTABLISH AN IN-
ABS DUSTRY-WIDE DE FACTO STANDARD. THE MOST ENCOMPASSING EFFORT IS THAT
ABS OF THE IEEE. THIS APPROACH SUPPORTS DIFFERENT MEDIA, TWO ALTERNATE
ABS ACCESS METHODS, SPECIFIC, MULTICAST, AND BROADCAST ADDRESSING AND
ABS DATAGRAM AS WELL AS FULL ACKNOWLEDGING LINK PROTOCOLS. IN SHORT,THE
ABS RESULTANT IEEE STANDARD WHEN COMPLETED (SEEMS TO BE 06.81) SHOULD
ABS PROVIDE THE TOOLS TO ALLOW SIMPLER AND MORE COST EFFECTIVE NETWORKS
ABS OFFERING A LARGER RANGE OF SERVICES TO THE USER. PASSAGE OF IEEE
ABS AND PROWAY STANDARDS WILL START AN UNPRECEDENTED GROWTH IN LOCAL
ABS AREA NETWORKS. COMPANIES WITH VESTED INTERESTS LIKE DIX WILL RESIST
ABS MEETING THE STANDARD, BUT AS IN THE CASE OF THE X.25 PACKET-SWITCED
ABS PUBLIC DATA NETWORK RECOMMENDATION, THESE COMPANIES WILL EVENTUALLY
ABS CONFORM TO THE STANDARD OR AT FIRST GRADUALLY AND LATER MORE RAPID-
ABS LY LOSE INFLUENCE.

NUM 52
TIT BATTLE OF THE NETWORKERS
AUT K. KLEE; J.W. VERITY; J. JOHNSON
QUE DATAMATION, 1982, HEFT 3 (MAERZ), S.115-127
KEY BASE/BROAD ARGUMENTS-WANG-XEROX-CSMA/CD-MARKET-FIGHT-SYTEK-AMDAX
KEY IBM-BELL LABS-AT&T- !!!! GOOD LIST OF PRODUCTS !!!!
KEY
DAT 03.82
FIR ---
DET ---
KAP 2.1 -

ABS BATTLE: BROADBANDERS/BASEBANDERS
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NUM 53
TIT HAUSINTERNE NETZE GEBEN IHR DEBUET
AUT G. SANDSCHEPER
QUE ONLINE, 1981, HEFT 4, S.239-240
KEY 3M-XEROX ETHERNET- AEG TELEFUNKEN DIKOS-
KEY
KEY
DAT 01.81
FIR ---
DET ---
KAP ---

ABS DIE INTEGRATION DER UEBERTRAGUNG VON TEXT-DATEN, SPRACH- UND BILD-
ABS KOMMUNIKATION IST IN DEN LETZTEN JAHREN VIELFACH BESCHWOREN WORDEN.
ABS AUF DER HANNOVERMESSE WURDE SIE FUER DIE GEWERBLICHE KOMMUNIKATION,
ABS D.H FUER DEN INFORMATIONSFLUSS IM UNTERNEHMEN, ERSTMALS SICHTBAR.
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NUM 54
TIT BROADBAND TECHNOLOGY MAGNIFIES LOCAL NETWORKING CAPABILITY
AUT M.A. DINESON; J.J. PICAZO
QUE DATA COMMUNICATIONS, 1980, HEFT 2, S.61-79
KEY CONTROL RETRANSMISSION FACILITY (CRF) - FREQUENCY MULTIPLEXING
KEY FDM - COUPLER-SPLITTER-UNIDERICTIONAL/BIDIRECTIONAL-CATV
KEY
DAT 02.80
FIR NETWORK RESOURCES CORP., SAN JOSE
DET ---
KAP 2.2.4.3

ABS CONVENTIAL COAXIAL CABLE IS YIELDING TO BROADBAND - A MEDIUM
ABS THAT OFFERS ALMOST FIFTY TIMES MORE CAPACITY AND BANDWITH.
ABS
ABS UBLICHE BANDBREITENAUFTEILUNG - BROADBAND TOPOLOGIES-
ABS RF MODEMS LIST - BASEBAND/BROADBAND ARGUMENTS (VERGLEICH)
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NUM 55
TIT WAS IST EIN INTEGRIERTES BREITBAND-KOMMUNIKATIONSNETZ?
AUT A. NAAB
QUE ELEKTRONISCHE RECHNEANLAGEN, 1981, HEFT 5, S.221-225
KEY MERKMALE - LICHTLEITER - GLASFASER - REGENERATOR - WDM -
KEY STUFENPROFILFASER - GRADIENTENPROFILFASER - MONOMODEFASER -
KEY
DAT 06.81
FIR BUNDESMINISTERIUM FUER DAS POST- UND FERNMELDEWESEN, BONN
DET GLASFASERTECHNIK
KAP 2.2.4.1

ABS IN DEN ZURUECKLIEGENDEN 6 JAHREN HAT SICH AUF DEM GEBIET DER
ABS NACHRICHTENTECHNISCHEN FORSCHUNG UND ENTWICKLUNG EIN GLEICHSAM
ABS REVOLUTIONAERER SPRUNG VOLLZOGEN, DER WELTWEIT AUCH FUER FACHLEUTE
ABS IN DIESEM AUSMASS NICHT VORHERSEHBAR WAR: DIE ERWARTUNG, DASS
ABS AUFGRUND DER TECHNOLOGISCHEN ENTWICKLUNG IM BEREICH DER OPTISCHEN
ABS NACHRICHTENTECHNIK BEREITS AB 1985 BREITBANDIGE KOMMUNIKATIONS-
ABS SYSTEME AUF DER GRUNDLAGE DER GLASFASERTECHNIK WIRTSCHAFTLICH UND
ABS TECHNISCH AUSGEREIFT ZUR VERFUEGUNG STEHEN WERDEN.
ABS DER BEITRAG BESCHAEFTIGT SICH ZUNAECHST MIT DEN MERKMALEN DER
ABS OPTISCHEN NACHRICHTENTECHNIK UND STELLT DARAN ANSCHLIESSEND
ABS EIN MODELL FUER EIN INTEGRIERTES BREITBANDKOMMUNIKATIONSNETZ VOR.
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NUM 56
TIT THE MANY FACES OF LOCAL NETWORKING
AUT K.J. THURBER; H.A. FREEMAN
QUE DATA COMMUNICATIONS, 1981, HEFT 12 (DEZEMBER), S.62-69
KEY HYPERCHANNEL - ETHERNET - CLUSTER/ONE
KEY PUP-PROTOCOL ENCAPSULATION-GATEWAY-ROUTIMG-HYPERCACHE-DLCN-
KEY MASSTOR'S SHARED VSS-PIERCE RING-TOKEN-PERFORMANCE-CHIPS
DAT 12.81
FIR ARCHITECTURE TECHNOLOGY CORP., EDEN PRAIRIE
DET PUP
KAP 2-3.5

ABS THE AUTHORS EXPLAIN THE BASIC LOCAL-NETWORKING TECHNOLOGIES AND
ABS LIST, BY CATEGORY, THE CURRENTLY AVAILABLE LOCAL-NETWORK PRODUCTS.
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NUM 57
TIT STEPPED-UP PACE SPEEDS PRODUCTS RACE
AUT ---
QUE DATA COMMUNICATIONS, 1981, HEFT 12 (DEZEMBER), S.117-131
KEY WANG - 3COM - XEROX 820 - XEROX STAR - INTEL - ETHER-KIT -
KEY SYTEK-DEC - MODWAY
KEY
DAT 12.81
FIR ---
DET PREIS, ANSCHRIFT DER FIRMEN, DATUM DER ANKUNDIGUNG
KAP ---

ABS IF THE ACCEPTANCE OF LOCAL NETWORKS COULD BE MEASURED BY THE
ABS NUMBER OF NEW ENTRIES IN THE FIELD, THEN THE TECHNOLOGY IS
ABS CERTAINLY IN A HEALTHY STATE. CONSIDER, THAT JUST TWO YEARS AGO
ABS A USER COULD CHOOSE FROM ONLY A HANDFUL OF LOCAL NETWORKS. IN 1981
ABS ALONE, HOWEVER, ABOUT A DOZEN SUCH RELATED PRODUCTS MADE THEIR
ABS DEBUT. THE FOLLOWING TRIES TO GIVE AN OVERVIEW.
ABS SYTEK: LOCALNET/SYSTEM40/SYSTEM20-DEC/VAX/PDP11 INTERFACE-NETWORK
ABS RESOURCES CORP-GATEWAYS FOR TYMNET & TELENET-IBM 3270 TERMINAL
ABS ACCESS
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NUM 58
TIT LOCAL NETWORKS AT A GLANCE
AUT ---
QUE DATA COMMUNICATIONS, 1981, HEFT 12 (DEZEMBER), S.132-133
KEY
KEY
KEY
DAT 12.81
FIR ---
DET ALLES
KAP 2??

ABS VERGLEICHE DAZU AUCH NUMMER 57
ABS (TABELLARISCHER UEBERBLICK ZU ARTIKEL 57)
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NUM 59
TIT TECHNOLOGIES FOR LOCAL AREA COMPUTER NETWORKS
AUT I.W. COTTON
QUE COMPUTER NETWORKS, 1980, HEFT 4, S.197-208
KEY MITRE-ETHERNET-NBSNET-HYPERNET-FLOW CONTROL-CONNECTIVITY-BROADCAST
KEY ARQ-FEC-CRC-ECHOING-SPEED CONVERSION-STORE & FORWARD-FULLY CONNECTE
KEY NON SWITCHED-CIRCUIT SWITCHED-ROLL CALL POLLING-MESSAGE/PACKET SW-
DAT 11.80 -RING-CONTENTION-CATV-PBX-STANDARDS-
FIR NATIONAL BUREAU OF STANDARDS, WASHINGTON
DET ---
KAP 2

ABS LOCAL AREA COMPUTER NETWORKS ARE DISTINGUISHED FROM LONG DISTANCE
ABS NETWORKS BY THE NEED TO SERVE USERS IN A LIMITED GEOGRAPHIC AREA.
ABS THE SERVICE REQUIREMENTS FOR LOCAL AREA COMPUTER NETWORKS ARE
ABS REVIEWED AND SEVERAL CANDIDATE TECHNOLOGIES ARE BRIEFLY COMPARED
ABS IN THE CONCLUDING SECTION.REQUIREMENTS FOR LAN: DATA RATE-CONNECTI
ABS ERROR RATE-GEOGR SEPARATION-NETWORK SERVICES:SPEED CONV-CODE CONV-
ABS ECHOING-DATA FORWARDING CONDITION-DEVICE SPECIFIC-NON SW LAN:
ABS FULLY CONNECTED NETW-HIERARCHICAL-CIRCUIT SWITCHED LAN:-MESSAGE
ABS SWITCHED LAN:-RING-CONTENTION NETW-ETHER/NBSNET/MITREBUS/HYPERCH
ABS COMPARISON OF TECHNOLOGIES: TOPOLOGY/MEDIA/SHARING TECHNIQUE/
ABS USER SERVICES/PROTOCOLS- PROBLEMS: COMMERCIAL AVAILABILITY-
ABS STANDARDS-LEGAL ISSUES- CONCLUSION
ABS
ABS
ABS

NUM 60
TIT LOCAL NETWORKS' CONSENSUS: HIGH SPEED
AUT P. HSI; T. LISSACK
QUE DATA COMMUNICATIONS, 1980, HEFT 12 (DEZEMBER), S.56-66
KEY ETHERNET - MITRE - HYPERBUS - FORDNET - NBSNET - IEEE - IFIPS
KEY TRANSCEIVER-TAP-RF-DIX-PDP-11-BIU-CATV-CSMA/CD-BASEBAND-HEADEND
KEY LINK CONTROL PROTOCOLS-HDLC-X.25-MANCHESTER ENCODING!!-ADDRESSING
DAT 12.80 FRAME FORMATS-FLOW CONTROL-HIGH LEVEL PROTOCOLS-
FIR NETWORK ANALYSIS CORP., GREAT NACK
DET VIEL
KAP 2

ABS A LOOK AT FIVE LOCAL NETWORKS AND TWO PROPOSED STANDARDS REVEALS
ABS VITAL DIFFERENCES - ESPECIALLY IN ACCESS PROTOCOLS AND
ABS LINK CONTROL
ABS INTERFACING THE BUS-BUS CHARASTERISTICS (TABLE)-ACCESS PROTOCOLS-
ABS ENHANCED ADDRESSING- FRAME FORMATS-OVERHEAD-CONTROLLING THE FLOW
ABS MITRENET PROTOCOL HIERARCHY-PUP-BRIDGES: FRAME FILTER/
ABS FRAME REPEATER/MEDIA TRANSLATOR
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NUM 61
TIT LOKALE RECHNERNETZE - DER UEBERGANG VOM KLEINEN ZUM MITTELGROSSEN
AUT H.R. SCHUCHMANN
QUE GERMAN CHAPTER OF THE ACM, NEWS, NOVEMBER 1981, S.13-16
KEY ETHERNET - HYPERBUS - NET/ONE - CAMBRIDGE RING - CSMA - MERKMALE
KEY
KEY
DAT 11.81
FIR ---
DET TECHNISCHEN MERKMALE EINES LAN
KAP 2.1

ABS DER AUTOR VERSUCHT EINE ERKLAERUNG FUER DEN BOOM BEI LOKALEN
ABS RECHNERNETZEN ZU GEBEN. ER GEHT KURZ AUF KONZEPTION UND TECHNISCHE
ABS MERKMALE DER LOKALEN NETZE EIN UND BESCHREIBT EINIGE TOPOLOGIEN
ABS (RING, BUS), BEVOR ER EINEN KNAPP BEMESSENEN UEBERBLICK DER
ABS HEUTE REALISIERTEN LOKALEN NETZE LIEFERT.
ABS
ABS DIE WICHTIGSTEN TECHNISCHEN MERKMALE EINES LOKALEN NETZES: ...
ABS
ABS RING/BUS VERGLEICH
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ABS CSMA - KOPPLER (AKTIV/PASSIV) - REPEATER
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NUM 62
TIT DIE DIGITALE RINGLEITUNG
AUT V. STEINLEIN
QUE NTZ 1981, HEFT 8, S.496-499
KEY NETZSTRUKTUREN-RINGLEITUNG-PRIMARSTATION-DATENSTATION-NACHRICHTEN
KEY RINGLEITUNG-
KEY
DAT 01.81
FIR IBM, BOEBLINGEN
DET SDLCRAHMEN FORMAT
KAP 2.2 - 3.5.5

ABS DIE MODERNE DATENVERARBEITUNG IST OHNE DAS TERMINAL NICHT MEHR
ABS VORSTELLBAR. DAS TERMINAL IST EINE DATENSTATION, DIE VERSCHIEDENE
ABS FORMEN HABEN KANN. ES KANN SICH DABEI UM EINEN FERNSCHREIBER
ABS HANDELN ODER UM EINEN BILDSCHIRM MIT ANGESCHLOSSENER SCHREIB-
ABS MSCHINENTASTATUR, UM EINEN DRUCKER ODER UM EINE VIELZAHL ANDERER
ABS GERAETE. WIE DIE DATENSTATIONEN MIT DEM RECHNER ZUSAMMENARBEITEN,
ABS SOLL IN DIESEM AUFSATZ AM BEISPIEL DER RINGLEITUNG BESCHRIEBEN
ABS WERDEN.
ABS
ABS NETZSTRUKTUREN: STERN/RING - AUFGABEN DER JEWEILIGEN PRIMARSTATION
ABS SENDE UND EMPFANGSZYKLUS - LEISTUNGSMERKMALE - TERMINALANWENDUNG/
ABS FILE DRUCKEN
ABS
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NUM 63
TIT LOKALE NETZE: DAS FEHLENDE GLIED IN DER TELEKOMMUNIKATION
AUT H.P. BOELL
QUE ONLINE, 1981, HEFT 6 (JUNI), S.450-454
KEY ANFORDERUNGEN-ARCHITEKTUR-PROTOKOLLHIERARCHIE-CIRCUIT/DATAGRAMM
KEY TOPOLOGIE-MEDIEN-EBENE 1/2/3-KOLLISION-INTERFACE AUFGABEN/PREISE
KEY ZUGRIFFSVERFAHREN-DAISY CHAINING-TOKEN-SLOT-REGISTER INSERTION
DAT 06.81
FIR TECHNISCHE AKADEMIE, WUPPERTAL
DET ---
KAP 2.2

ABS LOKALE NETZE STELLEN DAS FEHLENDE GLIED IN DER TELEKOMMUNIKATION
ABS DAR; SIE WERDEN DEN FERN- SOWIE SYSTEMNAHEN BEREICH ERGAENZEN.
ABS DAMIT GEHT EINE WEITERE INTEGRATION VON KOMMUNIKATIONSDIENSTEN
ABS EINHER. DER AUTOR UNTERNIMMT DEN VERSUCH, EINE VERBINDUNG
ABS ZWISCHEN LOKALEN NETZEN UND TELEKOMMUNIKATIONSNETZEN HERZUSTELLEN.
ABS DABEI WIRD DAS JEWEILS SPEZIFISCHE HERAUSGESTELLT.
ABS RANDBEDINGUNGEN FUR FERN/LOKALE NETZE - SPEZ FORDERUNGEN AN LOKALE
ABS NETZE- FERN/LOKAL/SYSTEMNAHER BEREICH-BUROBEREICH/PRODUKTIONSBEREIC
ABS RECHENZENTRUMSBEREICH - TABELLE VON DEN WESENTLICHSTEN PRODUKTEN
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NUM 64
TIT LOCAL NETWORKING: THE MISSING LINK EMERGES
AUT W. FEDERBUSCH
QUE DATA COMMUNICATIONS, 1980, HEFT 7 (JULI), S.81-89
KEY TANDEM-CAMBRIDGE RING-XEROX ETHERNET-HYPERCHANNEL-MASSTOR-
KEY BACKEND FILE PROCESSING-SPLITTER-STAR COUPLER-
KEY
DAT 07.81
FIR NETWORK SYSTEMS CORP, MINNEAPOLIS, NSC
DET ---
KAP 2.2

ABS WITHIN A DECADE, THE LOCAL NETWORK HAS EVOLVED FROM A SIMPLE
ABS CHANNEL COUPLER BETWEEN TWO PROCESSORS INTO A MULTINODAL,
ABS HIGH-SPEED BUS THAT REQUIRES NO CENTRALIZED CONTROL.
ABS STAR NETWORKS PROBLEMS-RING-BUS CONNECTION-BUS ADVANTAGES-
ABS FIBER OPTIC-BROADBAND-GLOBAL NODES
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NUM 65
TIT KONZEPTE UND BEWERTUNGSMETHODEN FUER LOKALE RECHNERNETZE
AUT O. SPANIOL
QUE ---
KEY STAR - RING - BUS - SLOTTED RING - TOKEN RING-SLOTTED ETHERNET-
KEY KLASSIFIKATION-RANDOM ACCESS-POLLING-ALOHA-CSMA-LBT-NON-PERSISTENT
KEY 1-PERSISTENT-KONFLIKT/FREI/BEREINIGUNG/ERKENNUNG/VERMEIDUNG-MLMA
DAT 09.81
FIR UNI FRANKFURT
DET ---
KAP 2.2.6

ABS HEUTIGE RECHENANLAGEN SIND MEIST AUF ANFORDERUNGEN DES TECHNISCH-
ABS WISSENSCHAFTLICHEN BEREICHS ZUGESCHNITTEN UDN UNTERSTUETZEN NEUE
ABS BENUTZERANFORDERUNGEN Z.B. AUF DEN GEBIETEN TEXTVERARBEITUNG UND
ABS DATENBANKMANAGEMENT NUR UNZUREICHEND.; ANDERERSEITS GIBT ES SPEZI-
ABS ALISIERTE GERAETE ZUR KOSTENGUENSTIGEN ABWICKLUNG SOLCHER AUFGABEN-
ABS STELLUNGEN. ES IST DAHER ZWECKMAESSIG, EINE VIELZAHL DIESER GERAETE
ABS MITTELS EINES LOKALEN NETZES ZU KOPPELN UND DAMIT DIE GESAMTHEIT
ABS ALLER ANGEBOTENEN DIENSTLEISTUNGEN ALLEN BENUTZERN VERFUEGBAR ZU
ABS MACHEN. DER ENTWURF EINES LOKALEN NETZES ERFORDERT DIE FESTLEGUNG
ABS DER NETZARCHITEKTUR UND DIE DEFINITION VON GEEIGNETEN NETZPROTOKOL-
ABS LEN. DIE ARBEIT ENTHAELT EINE VERGLEICHENDE DISKUSSION VON RING-
ABS UND BUSKONZEPTEN FUER LOKALE NETZE SOWIE DIE BESCHREIBUNG VERSCHIE-
ABS DENER NETZZUGANGSPROTOKOLLE UND IHRER EIGENSCHAFTEN. ZUM SCHLUSS
ABS WIRD EIN SPEZIELLES ZUGANGSPROTOKOLL FUER EIN RANDOM-ACCESS-BUSSY-
ABS STEM DURCH EIN MATH. MODELL BESCHRIEBEN UND ANALYTISCH AUSGEWERTET.

NUM 66
TIT COMPARING NETWORKING TECHNOLOGIES
AUT R.W. SANDERS
QUE DATAMATION, 1978, HEFT 7 (JULI), S.88-93
KEY PACKET SWITCHES - MESSAGE SWITCHES - TIME-DIVISION CIRCUIT SWITCHES
KEY
KEY
DAT 07.78
FIR COMPUTER TRANSMISSION CORP, EL SEGUNDO, CALIF.
DET TDMA-CIRCUIT SWITCHING
KAP 2.2.5

ABS TEN YEARS AGO, PACKET SWITCHING WAS SEEN AS THE MOST REASONABLE
ABS TECHNOLOGY FOR DATA COMMUNICATIONS NETWORKS.
ABS IN THE MEANTIME, OTHER TECHNOLOGIES CAME UP. THE AUTHOR GIVES
ABS A COMPARISON OF THOSE TECHNOLOGIES.
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NUM 67
TIT LOKALE NETZE - EINE KOMPONENTENDARSTELLUNG
AUT H.P. BOELL
QUE NTZ, 1981, HEFT 8, S.492-495
KEY UBERTRAGUNGSVERFAHREN-MEDIEN-INTEGRATION VON NETZE-NETZTOPOLOGIE-
KEY ZUGRIFFSVERFAHREN-TOKEN VERFAHREN-CSMA-INTERFACE-PROTOKOLLHIERARCHI
KEY TRANSPORTPROTOKOLLE-EBENE 1/2/3-CIRCUITVERFAHREN-
DAT 08.81
FIR TECHNISCHE AKADEMIE, WUPPERTAL
DET ---
KAP 2.2

ABS LOKALE NETZE WERDEN SEIT KURZEM STARK DISKUTIERT. SIE SIND DAS
ABS BESTIMMENDE GLIED IM TELEKOMMUNIKATIONSBEREICH, DER ZWISCHEN DER
ABS KOMMUNIKATION UEBER WEITE ENTFERNUNGEN UND DEN IM NAHBEREICH ANZU-
ABS SCHLIESSENDEN GERAETEN (Z.B. EINER RECHENANLAGE) LIEGT. BEI DER
ABS REALISIERUNG LOKALER NETZE SIND EINE REIHE VON KOMPONENTEN ER-
ABS FORDERLICH. DIESE KOMPONENTEN, UEBERTRAGUNG, ZUGRIFFSVERFAHREN,
ABS INTERFACES UND PROTOKOLLE WERDEN BESCHRIEBEN UND - SOWEIT MOEGLICH
ABS - MIT DENEN VERGLICHEN, DIE FUER DIE KOMMUNIKATION UEBER WEITE
ABS ENTFERNUNGEN HINWEG ERFORDERLICH SIND.
ABS
ABS EIGENSCHAFTEN VON LAN
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NUM 68
TIT LOCAL NETWORKS PROVE PRACTICAL FOR DATACOM SYSTEMS IN CLOSE ...
AUT H. CRAVIS
QUE DATAMATION,
KEY
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KEY
DAT 01.80
FIR A.D. LITTLE, CAMBRIDGE, MASS.
DET ---
KAP 2

ABS THE ARTICLE GIVES A REPORT OF LOCAL NETWORKS AT THE BEGINNING OF
ABS THE 1980'S.
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NUM 69
TIT REPLACING 3270S WITHOUT SACRIFICING FUNCTIONS
AUT P. MSUNAS; H.R. PETERSON
QUE DATA COMMUNICATIONS, HEFT 11 (NOVEMBER), S.83-92
KEY EMULATION-PROTOCOL CONVERSION-BSC-SDLC/SNA-VT-100-
KEY INSIDE THE TCP-PRINTERS TOO-BLOCK MODE-
KEY
DAT 11.81
FIR INDUSTRIAL COMPUTER CONTROLS, CAMBRIDGE, MASS.
DET 3270 FUNKTIONSWEISE-3276/3278 CONFIGS+TCP SOLUTIONS+PRICES
KAP 4.1

ABS A TERMINAL-CONTROL-PROGRAM DEVICE THAT INCORPORATES THE LATEST
ABS MICROPROCESSOR TECHNOLOGY PERMITS THE COST-SAVING USE OF
ABS ASYNCHRONOUS TERMINALS IN 3270 NETWORKS.
ABS TCP CONTROLS UP TO 8 VT-100-S ON ONE BSC OR SDLC 3270 LINE TO
ABS AN IBM HOST-
ABS 3276=$7065
ABS 3276+3*3278=$16200
ABS 3276+7*3278=$28800
ABS 8*3276=$56520
ABS ASYNCHR TERM=$1000
ABS TCP+4*ASY TERM=$9800
ABS TCP+8*ASY TERM=$16100
ABS PROTOCOL CONVERTERS ECXPANDING NETW HORIZONS-DATA COMM OCT 79 P41
ABS HOST-TERMINAL COMMUNICATION ONLY IF: PA,PF,CLEAR,ENTER,TEST REQUEST

NUM 70
TIT NETWORK DATA MANAGEMENT FOR HETEROGENOUS COMPUTER NETWORKS: ...
AUT R. POPESCU-ZELETIN; L. HENCKEL; W. HEINZE; K. JACOBSEN; G. MAISS
QUE COMPUTER COMMUNICATIONS, 1981, HEFT 3, S.132-137
KEY DATA MANAGEMENT SYSTEM-OPEN SYSTEMS-VIRTUAL FILE CONCEPT-
KEY NETWORK DATA MANAGEMENT SYSTEM (NDMS)-PROTOCOL-TRANSLATION-TRANSFER
KEY DIRECTORY-REMOTE CONNECTION-DATA ACCESS-HMINET-BERNET-ISO
DAT 03.81
FIR HAHN-MEITNER INSTITUT FUER KERNFORSCHUNG, BERLIN
DET ---
KAP 2.2.7.4

ABS POSSIBLE SYSTEM ARCHITECTURES FOR DATA ACCESS AND TRANSFER IN
ABS COMPUTER NETWORKS ARE REVIEWED. OWING TO THE CONSIDERABLE
ABS DIFFERENCES BETWEEN THE TYPES OF DATA MANAGEMENT SYSTEM USED IN
ABS HETEROGENOUS NETWORKS, THE DEFINITION OF A NETWORK DATA MANAGEMENT
ABS SYSTEM FREE OF LOCAL CONSTRAINTS SEEMS TO BE THE MOST PRACTICAL
ABS APPROACH FOR STANDARDIZED FILE-ORIENTED COMMUNICATION. THE PROPOSED
ABS NETWORK DATA MANAGEMENT SYSTEM IS DESIGNED TO OPERATE IN AN OPEN
ABS SYSTEM ENVIRONMENT (ISO/TC97/SC16) AND WILL BE IMPLEMENTED IN TWO
ABS INTERCONNECTED NETWORKS.
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NUM 71
TIT IBM FINALLY GIVES U.S. USERS TICKET TO X.25 NETWORKS
AUT G.A. DEATON; A.S. BARCLAY
QUE DATA COMMUNICATIONS, 1981, HEFT 9 (SEPTEMBER), S.83-93
KEY X.25-SNA-PRODUCTS-LINK-LEASED/SWITCHED LINES-PACKET SWITCHING NET
KEY HDLC LAPB-COST-DEVICE-STANDARD-3270-3274-3276-SERIES 1-8100 SYS-PAD
KEY
DAT 09.81
FIR IBM, RESEARCH TRIANGLE PARK, N.C.
DET X.25
KAP 2.2.7.2

ABS IN VIEW OF THE GROWING NUMBER OF PACKET-SWITCHING NETWORKS, IBM
ABS HAS ADOPTED THE PHILOSOPHY, "IF YOU CAN'T BEAT THEM, JOIN THEM"
ABS AND HAS RELEASED - FOR THE FIRST TIME IN THE U.S. - STANDARD
ABS PRODUCTS SUPPORTING X.25.
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NUM 72
TIT A HIGH-LEVEL LANGUAGE FOR EASY X.25 UPDATES
AUT K. COLSTAD
QUE DATA COMMUNICATIONS, 1981, HEFT 9 (SEPTEMBER), S.65-77
KEY X.25-C LANGUAGE-PROTOCOL-X.DOT-COMPILER- HDLC-DTE
KEY
KEY
DAT 09.81
FIR PACIFIC SOFTWARE MANUFACTURING COMPANY, BERKELEY, CALIF
DET WHAT ARE PROTOCOLLS?- TABLE OF C COMPILERS
KAP 2.2.7.2

ABS THE X.25 COMMUNICATIONS PROTOCOL HAS BEEN WRITTEN IN THE "C"
ABS LANGUAGE. BOTH THE LANGUAGE AND THE PROTOCOL IMPLEMENTATION
ABS ARE ADAPTABLE, PORTABLE, AND SIMPLE TO MAINTAIN.
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NUM 73
TIT AN ARCHITECTURE FOR PUP SERVICES ON A DISTRIBUTED OPERATING SYSTEM
AUT B.D. FLEISCH
QUE ACM OPERATING SYSTEM REVIEW, 1981, HEFT 1, S.26-44
KEY ARPANET-RIG SERVICES-SERVER-INTERPROCESS COMM-PUP-LAYERS-PACKET
KEY TRANSPORT-PUP SERVER-SOCKET-
KEY
DAT 01.81
FIR UNIVERSITY OF ROCHESTER
DET ETHERNET HIGHER LEVEL PROTOCOL PRELIMINARY
KAP 2.2.7 - 3.2.1

ABS THIS PAPER PRESENTS AN ARCHITECTURE FOR PUP SERVICES ON RIG
ABS (ROCHESTER'S INTELLIGENT GATEWAY). PUP IS THE NAME OF AN INTERNET-
ABS WORK PACKET FORMAT (PARC UNIVERSAL PACKET), A HIERARCHY OF PROTO-
ABS COLS AND A STYLE OF INTERNETWORK COMMUNICATION. THE SERVICES PRO-
ABS POSED PROVIDE ACCESS TO PUP INTERPROCESS COMMUNICATION PRIMITIVES
ABS ON A DISTRIBUTED OPERATING SYSTEM. THE MOTIVATION FOR THIS DESIGN
ABS IS TWOFOLD: 1.) DEVELOPMENT OF A FRAMEWORK IN WHICH PROCESSES MAY
ABS PERFORM NETWORK COMMUNICATION USING A WIDE VARIETY OF INTERPROCESS
ABS COMMUNICATION STYLES, SELECTABLE BY THE PROCESS UPON INITIALIZATION
ABS THESE STYLES ARE NECESSARY BECAUSE OF THE DIVERSITY OF PROTOCOLS IN
ABS THE ENVIRONMENT. THE FRAMEWORK MUST EXTEND AN ENVIRONMENT THAT HAS
ABS PROVIDED LOGICAL CENTRALIZATION OF DISTRIBUTED RESOURCES. 2.) INTE-
ABS GRATION OF SOME NEW FUNCTIONS INTO THE MESSAGE BASED OPERATING SY-
ABS STEM WHICH ARE NOT CURRENTLY PROVIDED. ALTHOUGH MANY SERVICES HAVE
ABS BEEN PROVIDED BY RIG, PROVISION OF PUP WILL INCREMENT FLEXIBILITY.

NUM 74
TIT IBM SNA HOST INTERFACE PROCESSING SOFTWARE FOR A CHANNEL ...
AUT H.F. BALDOCK
QUE PROC DECUS, AMSTERDAM, 1980, S.141-144
KEY ...CONNECTED PDP11-IBM-GATEWAY-DECNET-X.25-CLUSTER-LAYER 1/2/3/4/5
KEY DRIVER-NETWORK INTERFACE TASK-
KEY
DAT 09.80
FIR SCICON CONSULTANCY INTERNATIONAL, SCI, LONDON
DET SNA
KAP 2.2.9

ABS THE ARTICLE CONTENTS A REPORT ON XN11. XN11 IS A COMMUNICATIONS
ABS SOFTWARE PACKAGE WHICH HAS BEEN JOINTLY DEVELOPED BY SCI AND
ABS HARWELL. IT ENABLES IBM AND DEC COMPUTERS TO COMMUNICATE DIRECTLY
ABS VIA AN IBM CHANNEL, SO THAT AN IBM MAINFRAME USING SNA CAN SUPPORT
ABS A COMMUNICATIONS NETWORK CONFORMING TO NON-IBM STANDARDS. IN DETAIL
ABS XN11 ENABLES IBM USERS TO ACCESS THE OUTSIDE WORLD VIA PUBLIC NET-
ABS WORKS AND TO EXPLOIT THE DISTRIBUTED PROCESSING CAPABILITY OF DEC
ABS COMPUTERS. XN11 ENABLES ALTERNATIVES TO EXPENSIVE IBM DEVICES.
ABS XN11 PROVIDES ACCESS TO IBM SERVICES, SUCH AS TSO, FROM NON-IBM
ABS DEVICES AND ALLOWS SUPPORT FOR FURTHER TERMINAL TYPES AND DEC-BASED
ABS NETWORK TO BE PROVIDED WITHOUT KNOWLEDGE OF SNA.
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NUM 75
TIT DATA COMMUNICATION USING THE TELECOMMUNICATION NETWORK
AUT M.F. SLANA; H.R. LEHMAN
QUE COMPUTER, MAI 1981, S.73-88, TUTORIAL SERIES 8
KEY PCM-CARRIER-BASEBAND-FDM-PHASE SHIFT MODULATION-AMPLITUDE MODULATIO
KEY FSK-DTE-DCE-BANDWIDTH-ECHO-DIGITAL DATA SYSTEM-DSE-VLSI-
KEY
DAT 05.81
FIR BELL TELEPHONE LABORATORIES, NAPERVILLE, ILLINOIS
DET MODULATION
KAP 2.2 - 7

ABS ADVANCES IN LSI AND DIGITAL COMMUNICATION TECHNOLOGIES ARE
ABS ENCOURAGING TELECOMMUNICATION GROWTH EMBODYING END-TO-END DIGITAL
ABS TRANSMISSION AND SWITCHING FACILITIES.TUTORIAL SERIES !!!!!
ABSVOICE TELECOMM NETWORK-TRANSMISSION MEDIA:TWISTED PAIR/COAX/MICRO
ABSWAWE/OPTICAL FIBER-ANALOG/DIGITAL CARRIERS BELL-DTE-INTERACTIVE/
ABS CONVERSATIONAL+COMPUTER-COMPUTER APPL-DCE-MODULATION TECHNIQUES!!!
ABS BAUD-ASYNCHRONOUS START/STOP-RS232C-CCITT V.24-SYNCHRON-FULL/HALF
ABS DUPLEX MODEMS-TELECOMM SWITCHING FACILITIES-CIRCUIT SWITCHING-
ABS MESSAGE SWITCHING-PACKET SWITCHING-NETWORK TRANSMISSION FACILITIES-
ABS DIGITAL TELECOMM NETWORK-DATAPHONE SYSTEM BELL-TDM-LINE REDUNDANCY
ABS AND RELIABILITY-ERROR PERFORMANCE-TECHNOLOGICAL IMPACT
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NUM 76
TIT COMPUTER NETWORK ARCHITEKTURES
AUT S. WECKER
QUE COMPUTER, SEPTEMBER 1979, S.58-72
KEY RESOURCE SHARING NETWORK-REMOTE COMMNETW-STANDARD-DISTR COMPUTATIO
KEY NETW-DISTRIBUTED PROCESSING-WORKSTATION-DATAGRAM-VIRTUAL CIRCUIT-
KEY COMM INTERFACE-LAYERED HIERARARCHIE-PROTOCOL-X.25-SDLC-SNA-DNA-ISO
DAT 09.79
FIR DIGITAL EQUIPMENT CORP, DEC, MAYNARD, MASS.
DET ---
KAP 2.2

ABS THIS TUTORIAL ANALYZES DEVELOPMENTS IN COMPUTER NETWORK ARCHITEC-
ABS TURES FROM A TOP-DOWN DESIGN VIEWPOINT - STARTING WITH USER INTER-
ABS FACE REQUIREMENT, THEN DEVELOPING A STRUCTURE TO REALIZE THAT
ABS INTERFACE. THE ARTICLE PRESENTS SOME OF THE CURRENT CONCEPTUAL AND
ABS IMPLEMENTATION DEVELOPMENTS IN COMPUTER NETWORK ARCHITECTURES. THE
ABS MATERIAL IS PRESENTED IN THE ORDER THAT A DESIGNER OF A NETWORK AR-
ABS CHITECTURE MIGHT FOLLOW IN PURSUING THAT DESIGN. THAT IS, THE PAPER
ABS STARTS WITH A DISCUSSION OF THE USES AND REQUIREMENTS OF DISTRIBU-
ABS TED PROCESSING SYSTEMS; DEVELOPS A LIST OF CHARACTERISTICS OF THE
ABS USER TO NETWORK COMMUNICATION INTERFACE; PRESENTS DESIGN STRUCTURES
ABS FOR BUILDING SUCH A COMMUNICATION MECHANISM; DISCUSSES ALTERNATIVES
ABS AND TRADEOFFS IN THE NETWORK ARCHITECTURE STRUCTURE; AND CONCLUDES
ABS WITH SOME EXAMPLES FROM CURRENT ARCHITECTURES AND RESEARCH EFFORTS.
ABS
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NUM 77
TIT MUTUAL ENCAPSULATION OF INTERNETWORK PROTOCOLS
AUT J.F. SHOCH; D. COHEN; E.A. TAFT
QUE COMPUTER NETWORKS, 1981, HEFT 4, S.287-301
KEY INTERNETWORK PROTOCOLS - MUTUAL ENCAPSULATION - PUP -
KEY PROTOCOL ARCHITECTURE - ARPA INTERNET PROTOCOL-ETHERNET-GATEWAY-
KEY PROTOCOL TRANSLATION-ENCAPSULATION-FTP-TCP-IP-ADDRESS MAPPING-
DAT 05.80
FIR XEROX, PALO ALTO; USC INFORMATION SCIENCES INSTITUTE, CALIF.
DET PUP-XEROX PROTOCOL STANDARD
KAP 2.2.7

ABS ENCAPSULATION IS A KEY CONCEPT IN DEVELOPING A LAYERED ARCHITECTURE
ABS FOR COMMUNICATION PROTOCOLS: OBJECTS FROM ONE LAYER CAN BE ENCAPSU-
ABS LATED FOR TRANSMISSION THROUGH A LOWER LAYER IN THE ARCHITECTURE.
ABS THIS APPROACH CAN BE USED TO COMBINE DIFFERENT INCOMPATIBLE NET-
ABS WORKS INTO A SINGLE "INTERNETWORK": PACKETS FROM A UNIFIED INTERNET
ABS PROTOCOL ARE ENCAPSULATED WITHIN THE NETWORK-SPECIFIC FORMATS AND
ABS PROTOCOLS ASSOCIATED WITH EACH INDIVIDUAL NETWORK. IN THIS PAPER
ABS THE NOTION OF MUTUAL ENCAPSULATION IS EXPLORED; AS AN EXAMPLE, THE
ABS COEXISTENCE OF THE XEROX INTERNET ENVIRONMENT WITH THE ARPA INTER-
ABS NET ENVIRONMENT IS PRESENTED. EACH OF THESE SYSTEMS IS COMPOSED OF
ABS SEVERAL INDIVIDUAL NETWORKS WITH A VARIETY OF PROTOCOLS AND PERFOR-
ABS MANCE PARAMETERS; BUT WITH MUTUAL ENCAPSULATION EACH CAN MAKE USE
ABS OF THE CAPABILITIES OF THE OTHER.
ABS
ABS

NUM 78
TIT OPEN SYSTEMS INTERCONNECTION - THE PRESENTATION SERVICE MODEL
AUT S. SCHINDLER; U. FLASCHE; C. BORMANN
QUE COMPUTER COMMUNICATIONS, 1981, HEFT 5, S.227-241
KEY DISTRIBUTED ABSTRACT MACHINE MODELL
KEY
KEY
DAT 10.81
FIR TECHNISCHE UNIVERSITAET, BERLIN
DET ---
KAP 2.2.7.4

ABS FUTURE END SYSTEMS, SO-CALLED 'WORKSTATIONS', WILL CONSIST OF A
ABS VARIETY OF DIFFERENT, SOMETIMES INTEGRATED DEVICES. THESE DEVICES
ABS MAY VARY FROM CHARATER-ORIENTED DISPLAY TERMINALS TO DATABASE-ORI-
ABS ENTED STORAGE DEVICES. THE AIM OF THE PRESENTATION SERVICE IS TO
ABS ALLOW TWO WORKSTATIONS TO COMMUNICATE WITH EACH OTHER, IN A WAY
ABS INDEPENDENT OF THE PARTICULAR EQUIPMENT USED IN THESE TWO WORKSTA-
ABS TIONS. THE PRESENTATION SERVICE IS CONSIDERED AS THE LAYER6 SERVICE
ABS OF THE REFERENCE MODELS FOR OPEN SYSTEMS INTERCONNECTION AND FOR
ABS PUBLIC DATA NETWORK APPLICATIONS, WHICH ARE IDENTICAL IN SUBSTANCE.
ABS WORKSTATIONS ARE 'SYSTEMS' IN TERMS OF THESE REFERENCE MODELS. THE
ABS PRIMARY CONCERN OF THIS PAPER IS TO DISCUSS THE FOUNDATIONS OF THIS
ABS PRESENTATION SERVICE AND TO EXPLAIN THE MAIN PROPOSALS CURRENTLY
ABS BEING CONSIDERED BY STANDARDIZATION EXPERTS.
ABS
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NUM 79
TIT PERFORMANCE EVALUATION AND COMPARISON OF DEPENDABLE CHANNEL ...
AUT D.R. POWELL
QUE PROC OF THE 2ND INTL CONF ON DISTRIBUTED COMPUTING SYS PARIS
KEY DECENTRALISED DAISY CHAINING-ROLL CALL POLLING-CSMA-PERSISTENT-
KEY PRIORITY-COLLISION DETECTION-ACK-RETRANSMISSION-ADAPTIVE
KEY
DAT 04.81
FIR C.N.R.S., TOULOUSE, FRANCE
DET PERFORMANCE COMPARISON
KAP 2.2.6

ABS THE PAPER GIVES A UNIFIED COMPARISON OF CHANNEL ACCESS TECHNIQUES
ABS FROM THE VIEWPOINTS OF DEPENDABILITY AND DYNAMIC PERFORMANCE. THE
ABS ESSENTIAL ATTRIBUTES OF A DEPENDABLE CHANNEL ACCESS TECHNIQUE ARE
ABS DEFINED AND DISCUSSED: TRUE DECENTRALIZATION, ABILITY TO RECOVER
ABS AND EASE OF MAINTENANCE. A PRESELECTION OF THE MANY DIFFERENT TECH-
ABS NIQUES IS CARRIED OUT AND ONE "SELECTION" TECHNIQUE (DECENTRALIZED
ABS DAISY CHAINING) AND ELEVEN "RANDOM ACCESS" TECHNIQUES ARE DETAILED.
ABS THE DIFFERNET TECHNIQUES ARE THEN COMPARED BY A UNIFIED SIMULATION
ABS STUDY. IT IS SHOWN THAT: 1.) RANDOM ACCESS TECHNIQUES CAN GIVE A
ABS DYNAMIC BEHAVIOR THAT IS ANALOGOUS TO OR BETTER THAN DECENTRALIZED
ABS DAISY CHAINING WHILST FEATURING BETTER DEPENDABILITY CHARACTERIS-
ABS TICS, 2.) AT THE SMALL PRICE OF A DECREASE IN EFFECTIVE CHANNEL
ABS OCCUPATION, TWO TRULY DEPENDABLE RANDOM ACCESS TECHNIQUES ENABLE
ABS BOUNDED ACCESS TIMES TO BE ACHIEVED.
ABS

NUM 80
TIT MESSAGE-BASED PRIORITY FUNCTIONS IN LOCAL MULTIACCESS ...
AUT R. ROM; F.A. TOBAGI
QUE COMPUTER NETWORKS, 1981, HEFT 7 (JULI), S.273-286
KEY MULTIACCESS - LOCAL COMPUTER NETWORKS - PRIORITY - ACCESS PROTOCOLS
KEY BROADCAST BUS - ETHERNET - RING - CSMA - PERFORMANCE
KEY BIDIRECTIONAL/UNI-PRIORITY-FAIRNESS-PERSISTENT-RING-ROUND ROBIN-PAP
DAT 07.81
FIR SRI INTERNATIONAL, MENLO PARK; STANFORD UNIVERSITY
DET PRIORITY FUNCTIONS
KAP 2.2.6

ABS THE PROLIFERATION OF COMPUTER NETWORKS HAS BROUGHT ABOUT A WEALTH
ABS OF APPLICATIONS THAT IMPOSE DISPARATE REQUIREMENTS UPON THE
ABS COMMUNICATION CHANNELS THEY USE. IN PARTICULAR, THE TRAFFIC
ABS REQUIREMENTS DIFFER TO SUCH A DEGREE THAT OPTIMIZATION OF ACCESS
ABS SCHEMES FOR ONE PATTERN IS OFTEN DETRIMENTAL TO ALL REST. MESSAGE
ABS PRIORITY OFFERS A SOLUTION TO THE PROBLEM. IT PROVIDES A MEANS OF
ABS ADMINISTERING CHANNEL USAGE TO MEET THESE REQUIREMENTS WHILE
ABS MAINTAINING HIGH TOTAL UTILIZATION. THIS PAPER PROPOSES PRIORITY
ABS SCHEMES APPROPRIATE FOR INTRODUCTION INTO DIFFERENT ARCHITECTURES
ABS OF LOCAL MULTIACCESS COMMUNICATION SYSTEMS TO ACHIEVE THESE
ABS DESIRED RESULTS.
ABS
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NUM 81
TIT ANALYSIS OF A PRIORITIZED CSMA PROTOCOL BASED ON STAGGERED DELAYS
AUT W.R. FRANTA; M.B. BILODEAU
QUE ACTA INFORMATICA, 1980, S.299-324
KEY CSMA-SCALAR STATE MODEL-NO SIMULATION, ANALYTIC RESULTS- DELAY-
KEY THROUGHPUT-LOAD-PROBABILITY
KEY
DAT 01.80
FIR UNIVERSITY OF MINNESOTA, MINNEAPOLIS
DET ---
KAP 2.2.6

ABS CSMA PROTOCOLS WERE ORIGINALLY CONCEIVED FOR USE IN DIGITAL RADIO
ABS COMMUNICATION. SUCH PROTOCOLS ARE, HOWEVER, QUITE APPLICABLE INA
ABS VARIETY OF DISTRIBUTED COMPUTING AND LOCAL NETWORKING CONFIGURA-
ABS TIONS BASED ON A SHARED BUS. THE CSMA PROTOCOLS ARE CHARACTERIZED
ABS BY THE FACT THAT MESSAGE COLLISIONS CAN OCCUR ONLY IN A VERY SMALL
ABS TIME WINDOW WHOSE DURATION CORRESPONDS TO THE PROPAGATION DELAY OF
ABS THE BUS. THEY ARE FURTHER CHARATERIZED BY THE TECHNIQUE USED TO
ABS SUBSEQUENTLY SERIALIZE THE TRANSMISSION OF THE COLLIDING MESSAGES.
ABS THE PAPER GIVES AN ANALYSIS OF THE SITUATION WHEREIN COLLIDING
ABS MESSAGES ARE SERIALIZED BY USING A SET OF STAGGERED RETRY DELAYS
ABS ASSOCIATED WITH THE SOURCES THAT MAY GENERATE THE COLLIDING MESSA-
ABS GES AND CONTENTS PATH THROUGHPUT AND MESSAGE DELAY CURVES, AS A
ABS FUNCTION OF MESSAGE GENERATION RATE. THESE CURVES SHOW, THAT THE
ABS PROTOCOL IS IN A SENSE SELF STABALIZING, SERVE TO QUANTIFY ITS BE-
ABS HAVIOR AND INDICATE LOADING LEVELS WITH UNACCEPTABLE MESSAGE DELAYS

NUM 82
TIT THE ARPA INTERNET PROTOCOL
AUT J.B. POSTEL; C.A.SUNSHINE; D. COHEN
QUE COMPUTER NETWORKS, 1981, S.261-271
KEY PROTOCOL- ARPA NET-INTERNETWORK-DATAGRAM-GATEWAY-DOD-DARPA-ADDRESSI
KEY IP-CATENET-SUBSCRIBER-TCP-TYPE OF SERVICE-TIME TO LIVE-DATAGRAM
KEY VIRTUAL CIRCUIT-FRAGMENTATION-ENCAPSULATION-SOURCE ROUTING-MONITORI
DAT 01.81
FIR UNIVERSITY OF SOUTHERN CALIFORNIA
DET PUP - ARPA
KAP 2.2.7

ABS A VARIETY OF COMPUTER NETWORKS ARE INTERCONNECTED BY GATEWAY COMP-
ABS UTERS IN THE ARPA INTERNETWORK SYSTEM. PROCESSES ON DIFFERENT NET-
ABS WORKS MAY EXCHANGE MESSAGES WITH EACH OTHER BY MEANS OF AN INTERNET
ABS PROTOCOL WHICH MUST BE IMPLEMENTED IN EACH SUBSCRIBER (HOST) COMP-
ABS UTER AND IN THE GATEWAYS. THE INTERNET PROTOCOL IS A RELATIVELY
ABS SIMPLE PROTOCOL THAT PROVIDES FOR THE DELIVERY OF INDIVIDUAL MESSA-
ABS GES (DATAGRAMS) WITH HIGH BUT NOT PERFECT RELIABILITY. THIS INTER-
ABS NET PROTOCOL DOES NOT REPLACE THE EXISTING PROTOCOL IN ANY NETWORK,
ABS BUT IS USED BY PROCESSES TO EXTEND THE RANGE OF COMMUNICATIONS.
ABS MESSAGES IN INTERNET PROTOCOL ARE TRANSMITTED THROUGH ANY INDIVI-
ABS DUAL NETWORK BY ENCAPSULATING THEM TO THAT NETWORK'S PROTOCOL. THIS
ABS PAPER PRESENTS AN OVERVIEW OF THE INTERNET PROTOCOL AND THE
ABS OPERATION OF THE GATEWAY COMPUTERS IN THE ARPA INTERNET SYSTEM.
ABS
ABS

NUM 83
TIT OFFENE KOMMUNIKATIONSSYSTEME - HEUTE UND MORGEN
AUT S. SCHINDLER
QUE INFORMATIK SPEKTRUM, 1981, S.213-228
KEY DERZEITIGE RECHNERNETZE-NATIONALOKONOMISCHE INTERESSE-PTT-OSI-X.21
KEY CCITT-FLUSSDIAGRAM-SOFTWARETECHNISCHE ASPEKTE-APPLIKATIONSSTANDARD
KEY PORTABILITAT-KOMPATIBILITAT-TRANSPARENZ-
DAT 08.81
FIR TECHNISCHE UNIVERSITAET, BERLIN
DET ---
KAP ---

ABS DIE ARBEIT UNTERSUCHT EINIGE ZENTRALE FRAGEN UEBER 'OFFENE SYSTEME'
ABS UND ERLAEUTERT, WIE SIE SICH HEUTE STELLEN UND WIE SIE SICH ENT-
ABS WICKELN DUERFTEN, Z.B.:
ABS - WELCHES OEKONOMISCHE INTERESSE BESTEHT AN OFFENEN SYSTEMEN?
ABS - WELCHE TECHNOLOGISCHEN VERAENDERUNGEN KENNZEICHNEN OFFENE SYSTEME
ABS - WAS HABEN OFFENE SYSTEME ZU TUN MIT OEFFENTLICHEN SYSTEMEN,
ABS   LOKALEN SYSTEMEN, FIRMENSYSTEMEN?
ABS - WELCHE ROLLE SPIELEN STANDARDS, UND WIE WEIT IST DIE NATIONALE
ABS   UND INTERNATIONALE ARBEIT DARAN?
ABS - WELCHE WECHSELWIRKUNGEN ZWISCHEN SOFTWARETECHNIK UND MIKRO-
ABS   PROZESSORTECHNIK VERURSACHEN OFFENE SYSTEME?
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ABS KURZ: OFFENE SYSTEME - EIN MODEWORT DER FUTUROLOGIE ODER EIN
ABS   SCHLUESSELWORT NEUER TECHNOLOGIEN?
ABS

NUM 84
TIT KOMMUNIKATION OFFENER SYSTEME - STAND UND PERSPEKTIVEN DER ...
AUT H.J. BURKHARDT
QUE DER GMD-SPIEGEL, 2/81, S.43-56 UND 3/81, S.50-60
KEY ...NORMUNGSARBEITISO/TC-REFERENZMODELL-ENDSYSTEM-TRANSITSYSTEM
KEY HIERARCHIE-PROTOKOLL-EBENE
KEY
DAT 01.81
FIR GMD, BONN
DET ISO MODELL
KAP 2.2.7

ABS IN DEM BEITRAG WIRD EIN UEBERBLICK UEBER DIE NORMUNGSARBEIT IN
ABS DIESEM BEREICH GEGEBEN. ES WIRD VERSUCHT, EINIGE IMMER WIEDER-
ABS KEHRENDE WESENTLICHE MISSVERSTAENDNISSE UND FEHLINTERPRETATIONEN
ABS AUSZURAEUMEN, DIE IMMER WIEDER ZU FALSCHEN BEWERTUNGEN DER NOR-
ABS MUNGSARBEEIT ODER UNREALISTISCHEN ERWARTUNGEN FUEHREN. ES WIRD
ABS HERAUSGESTELLT, WAS ANWENDER UND NUTZNIESSER DER ANGESTREBTEN
ABS NORMEN SINNVOLLERWEISE VON IHNEN ERWARTEN KOENNEN. DAZU WIRD
ABS ZUNAECHST DAS BASIS-REFERENZMODELL FUER DIE KOMMUNIKATION OFFENER
ABS SYSTEME VORGESTELLT. IM ZWEITEN TEIL WERDEN DIE ANGESTREBTEN
ABS NORMEN, PROBLEME DER NORMENUMSETZUNG UND DIE ZUSAMMENHAENGE
ABS ZWISCHEN KOMMUNIKATIONSARCHITEKTUR UND BETRIEBSSYSTEMARCHITEKTUR
ABS DISKUTIERT.
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NUM 85
TIT DATENPAKETVERMITTLUNG - NUTZUNG DES NETZES DATEX-P DER DBP
AUT R. SPETH; J. KNOP
QUE DAS RECHENZENTRUM, 1980, HEFT 4, S.235-246
KEY DATEX-P-X.25-DATENNETZ-DATEX-P20-DATEX-P32-DATEX-P33-DATEX-P10
KEY KOSTEN-ISO ARCHITEKTURMODELL
KEY
DAT 09.80
FIR UNIVERSITAET DUESSELDORF
DET DATEX-P
KAP ---

ABS DER ARTIKEL BEHANDELT HAUPTSAECHLICH FOLGENDE FRAGEN:
ABS - WELCHES NEUARTIGE LEISTUNGSANGEBOT UMFASST DATEX-P?
ABS - WIE IST DIESES NEUE SERVICE-ANGEBOT MIT VORHANDENEN DV-SYSTEMEN,
ABS GERAETEN ETC NUTZBAR ZU MACHEN?
ABS - WELCHE KOSTENSTRUKTUR LIEGT VOR?
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NUM 86
TIT HOW HYPERBUS AND HYPERCHANNEL FIT INTO A TWO-BUS LNA
AUT P. BINNEY
QUE LOCAL DISTRIBUTED NETWORK, ONLINE CONFERENCE, LONDON, 11-13 MAY '81
KEY BUS INTERFACE UNIT-HYPERCHANNEL-ADAPTOR-DOUBLE BUFFERED-TRUNK-FRAME
KEYINTERFACE
KEY
DAT 05.81
FIR TESDATA SYSTEMS, FRANCE
DET ---
KAP 3.1.1

ABS THE CHANGE IN EMPHASIS IN INFORMATION PROCESSING, FROM SEVERAL
ABS DISCRETE APPLICATIONS TO ONE HOMOGENOUS SERVICE, DICTATES A UNIFORM
ABS APPROACH TO SYSTEM ARCHITECTURE. THIS ARCHITECTURE CONSISTS OF
ABS THREE FUNCTIONAL LAYERS OF DISTRIBUTED PROCESSING INTERCONNECTED BY
ABS TWO BUS SYSTEMS. HYPERBUS, A MEDIUM SPEED BUS SYSTEM, IS BRIEFLY
ABS COMPARED TO OTHER IMPLEMENTATIONS, WHILE HYPERCHANNEL IS DESCRIBED
ABS IN THE CONTEXT OF HIGH SPEED BUS SYSTEMS. THE OBJECT OF THIS PAPER
ABS IS TO SHOW THAT THE REQUIREMENTS OF A HOMOGENOUS SERVICE IMPLY A
ABS GENERAL SYSTEM STRUCTURE BASED ON THE INTERTWINED TECHNOLOGIES OF
ABS LOCAL AREA BUS SYSTEMS AND DISTRIBUTED PROCESSING.
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NUM 87
TIT A STRATEGIC OVERVIEW OF LOCAL COMPUTER NETWORKS
AUT R.M. METCALFE
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.1-9
KEY LCN-LAN-REQUIREMENT-FDM-TDM-CATV-RS 232C-STAR-RING-BUS-PROTOCOL
KEY
KEY
DAT 05.81
FIR 3COM CORP., MENLO PARK, CALIF
DET ---
KAP 2.2

ABS DISTRIBUTED OFFICE SYSTEMS NEED LOCAL COMPUTER NETWORKS. MUST EACH
ABS OFFICE SYSTEM VENDOR OFFER ITS OWN UNIQUE LOCAL COMPUTER NETWORKING
ABS SYSTEM? HOW WILL VOICE, VIDEO, TERMINAL, WORKSTATION, AND MAINFRAME
ABS LOCAL COMMUNICATION BE UNIFIED DURING THE 1980S? WILL LOCAL NET-
ABS WORKS BE ANALOG OR DIGITAL, CENTRALIZED OR DISTRIBUTED, CIRCUIT OR
ABS PACKET SWITCHED? WHEN STARS, RINGS, AND BUSES ARE UNDERSTOOD, WILL
ABS OFFICE SYSTEM USERS THEN BE ABLE TO BUILD MULTIVENDOR
ABS CONFIGURATIONS? THESE ARE ALL KEY QUESTIONS - THIS OVERVIEW IS
ABS INTENDED TO PROVIDE A BACKGROUND AGAINST WHICH THEY MAY BE
ABS CONSIDERED.
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NUM 88
TIT THE INFORMATION OUTLET: A NEW TOOL FOR OFFICE ORGANIZATION
AUT Y.K. DALAL
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.11-19
KEY
KEY
KEY
DAT 05.81
FIR XEROX CORP., USA
DET ---
KAP 2.2

ABS TODAY'S OFFICE CAN BE BETTER ORGANIZED BY USING TOOLS THAT HELP IN
ABS MANAGING INFORMATION. DISTRIBUTED OFFICE INFORMATION SYSTEMS PERMIT
ABS AN ORGANIZATION TO "WADE INTO THE FUTURE" BY REDUCING THE INITIAL
ABS PURCHASE COST, AND BY PERMITTING THE SYSTEM TO EVOLVE ACCORDING TO
ABS THE NEEDS AND STRUCTURE OF THE ORGANIZATION. WITHIN AN ORGANIZATION
ABS ONE FINDS A NATURAL LOCALITY OF ACTIVITY AND INTERACTION, WHICH CAN
ABS BE PRESERVED AND EXPLOITED BY LOCAL COMPUTER NETWORKS LIKE THE
ABS ETHERNET SYSTEM. LOCAL NETWORKS ARE THE FOUNDATION OF OFFICE INFOR-
ABS MATION SYSTEMS, BUT SHOULD BE VIEWED AS ONE COMPONENT OF AN INTER-
ABS NETWORK COMMUNICATION SYSTEM. THE ARCHITECTURE OF THE SYSTEM MUST
ABS PERMIT GROWTH BOTH IN SIZE AND TYPES OF OFFICE SERVICES. IT MUST
ABS ALSO PERMIT INTERCONNECTION WITH SYSTEMS FROM OTHER VENDORS THROUGH
ABS PROTOCOL TRANSLATION GATEWAYS THAT CAPTURE THE INCOMPATIBILITIES,
ABS RATHER THAN FORCING EACH APPLICATION TO HANDLE THESE
ABS INCOMPATIBILITIES.

NUM 89
TIT ORGANISATIONAL PROBLEMS AND OPPORTUNITIES
AUT M. COLE
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.21-29
KEY PERSONAL COMPUTING-OFF-THE-SHELF-SYSTEM ECONOMICS-WORD PROCESSING
KEY
KEY
DAT 05.81
FIR LOGICA VTS, ENGLAND
DET ---
KAP 2.2

ABS LOCAL NETWORK TECHNOLOGY IS APPLICABLE TO A BROAD RANGE OF
ABS EXISTING AND EMERGING COMPUTER SYSTEMS APPLICATION. IN THIS PAPER
ABS WE REVIEW TWO IMPORTANT AREAS: PERSONAL COMPUTING AND ON-SITE
ABS COMPUTER COMMUNICATION, AND TOUCH ON WORD PROCESSING AS A THIRD
ABS AREA. CONSIDERATION IS GIVEN TO THE ORGANISATIONAL PROBLEMS
ABS ENCOUNTERED IN THESE AREAS AND THE OPPORTUNITIES PRESENTED BY LOCAL
ABS NETWORKING. DISTRIBUTED ARCHITECTURES OFFER THE PROSPECT OF
ABS EVOLUTIONARY PROGRESSION TO INTEGRATION OF FACILITIES; SOME OF THE
ABS BENEFITS ARE IDENTIFIED, TOGETHER WITH COMMENT ON SOME OF THE
ABS OTHER ISSUES ARISING.
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NUM 90
TIT LOCAL NETWORKS AND THE MULTINATIONALS
AUT P.J. GIBSON
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.31-45
KEY
KEY
KEY
DAT 05.81
FIR ITT WORLD HEADQUARTERS, USA
DET ---
KAP ---

ABS COMPANIES WITH MULTIPLE LOCATIONS AND RELATIVELY AUTONOMOUS LOCAL
ABS MANAGEMENT FACE DIFFICULTIES IN ENSURING COMPATIBILITY BETWEEN
ABS LOCAL NETWORKS AND DISTRIBUTED SYSTEMS. THESE PROBLEMS ARE
ABS COMPOUNDED FOR MULTINATIONALS IN THEIR EFFORTS TO COMMUNICATE
ABS ACROSS NATIONAL BOUNDARIES, AND AROUND THE GLOBE. THE ORGANIZA-
ABS TIONAL AND GEOGRAPHICAL COMPLEXITIES OF ITT, A MAJOR MULTINATIONAL
ABS CORPORATION, ARE DESCRIBED. THESE COMPLEXITIES ARE RELATED TO THE
ABS PROBLEMS AND CHALLENGES OF INTERNAL NETWORKING AT THE CORPORATE
ABS LEVEL, POINTING OUT SUCCESSES ACHIEVED AND DESCRIBING THE LESSONS
ABS LEARNED ENROUTE TO THOSE SUCCESSES. AN APPROACH TO EXTENDING THE
ABS INTERNAL CORPORATE NETWORKING CAPABILITIES IS OUTLINED AND THE
ABS STRATEGY TO ACCOMPLISH THAT EXTENSION IS DISCUSSED.
ABS
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NUM 91
TIT SILK: AN INTEGRATED VOICE AND DATA SYSTEM
AUT B. JACKSON;J. NICHOLSON; B. ROBERTS; M. SNELLING
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.47-63
KEY LOOP-RING-DTE-DCE-VOICE-X.21-TELEPHONE-LOCAL BLOCK (LBL)-
KEY MAIN BLOCK (MBL)-PCM-INTERFACE-DEUTSCHE WELLE-DATAGRAM MODE-
KEY BASIC MODE-PAX-PABX-
DAT 05.81
FIR HASLER, LONDON
DET SILK
KAP 2.3 - 3.5.5

ABS SILK IS A DIGITAL LOOP SYSTEM FOR CARYING BOTH VOICE AND DATA
ABS TRAFFIC. IT EMPLOYS PACKET TECHNIQUES AND CAN PROVIDE A 10 MBIT/S
ABS TOTAL DATA TRANSFER RATE TO USERS AT AUP TO 1050 CONNECTED DEVICES.
ABS FOR DATA IT PROVIDES AN X.21 INTERFACE TO USER'S DATA TERMINAL
ABS EQUIPMENTS. FOR TELEPHONY IT PROVIDES ADVANCED PAX AND PABX
ABS FACILITIES. SOME DETAILS ARE GIVEN OF A MAJOR CURRENT APPLICATION
ABS OF SILK.
ABS SILK CAPABILITIES-FIGURE-TECHNICAL FEATURES: LBL-MBL-DATA EQUIPMENT
ABS TELEPHONES-SUPERVISORY & TEST EQUIP-SILK PACKET-X.21 INTERFACE-
ABS SILK X.21 DCE-BASIC/DATAGRAM MODE DCE-VOICE COMM VIA SILK:
ABS SILK TELEPHONY EQUIP-PAX FACILITIES: COMMON/NAME/THREE PARTY CALL
ABS CALL DIVERSION-FOLLOW ME-TRANSFER ON BUSY/NO REPLY- CAMP ON BUSY
ABS RECORD ON ABSENT/BUSY- PABX FACILITIES:+ LINE ACCESS-EXTERNAL DIALI
ABS LINE HUNTING-OPERATION OF TELEPHONE INSTRUMENTS-TEST AIDS-
ABS

NUM 92
TIT NESTAR MODEL A - A LOW COST NETWORK FOR MICROCOMPUTERS
AUT I.E. POWERS
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.65-72
KEY SERVER-CSMA-APPLE II-FILE SERVER-16 WAY BUS-PSEUDO CARRIER-
KEY CALENDER/CLOCK-DATE STAMP-STORAGE-PASCAL-NOTICE BOARD-MESSENGER-
KEY ELECTRONIC MAIL-UXBRIDGE
DAT 05.81
FIR ZYNAR LIMITED
DET ---
KAP 3.5

ABS THE NESTAR MODEL A IS AN AVAILABLE LOCAL COMPUTER NETWORK COMBINING
ABS THE POPULAR APPLE II PERSONAL COMPUTER WITH A COST-COMPATIBLE
ABS ETHERNET STYLE NETWORK. A HIGH LEVEL OF EMPHASIS HAS BEEN PLACED
ABS ON PROVIDING RUGGED AND RELIABLE SOFTWARE BACKED UP BY
ABS PROFESSIONAL GRADE MAINTAINABLE HARDWARE IN CRITICAL COMMON
ABS COMPONENTS. THIS DOCUMENT PROVIDES A PRODUCT DESCRIPTION OF
ABS THE NESTAR MODEL A.
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NUM 93
TIT DESIGN OF APPLICATION PROGRAMS FOR DISTRIBUTED SYSTEMS
AUT P. WHITEHOUSE
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.85-95
KEY
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KEY
DAT 05.81
FIR SPL INTERNATIONAL, ITALIEN
DET ---
KAP ---

ABS ONE OF THE MOST PRESSING PROBLEMS TODAY IN THE LOCAL NETWORK AREA
ABS IS THE MATCHING OF LOCAL NETWORK CHARACTERISTICS WITH THE
ABS APPLICATION SYSTEM REQUIREMENTS. THIS PAPER LOOKS AT HOW
ABS DISTRIBUTED APPLICATIONS ARE SUPPORTED BY THE CHARACTERISTICS OF
ABS LOCAL NETWORKS, LOOKS AT THE PARTITIONING PROBLEM AND THE PROBLEMS
ABS OF RELIABILITY THAT THESE PROGRAMS WILL ENCOUNTER.
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NUM 94
TIT RECENT DEVELOPMENTS ON THE MITRENET
AUT G.T. HOPKINS
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.97-106
KEY INTERPROC COMM-COMMON SHARED DATABASE-MULTIVENDOR ENVIRONMENT-RJE
KEY BROADBAND-CSMA/CD-UNIDIR-BUS INTERFACE UNIT BIU-CIU-Z80-HDLC CHIP
KEY DEC VT-103-RS 232C-PDP-11/70-IBM 3031-VIRTUAL CIRCUIT-TERMINAL NET
DAT 05.81
FIR THE MITRE CORPORATION, USA
DET ---
KAP 3.4 - 3.3

ABS THIS PAPER REVIEWS RECENT PROGRESS ON THE MITRENET LOCAL NETWORK
ABS AND DISCUSSES SOME OF THE LESSONS LEARNED AND FUTURE PLANS FOR
ABS THE NETWORK
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NUM 95
TIT NETWORK INTERCONNECTION WITH PROVISION FOR ELECTRONIC MAIL SERVICES
AUT P.L. HIGGINSON; P.T. KIRSTEIN
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.107-121
KEY PROTOCOL-INTERCONNECTION-TERMINAL-ELECTRONIC MAIL-TELETEX
KEY
KEY
DAT 05.81
FIR UNIVERSITY COLLEGE, LONDON
DET ---
KAP 2.2.7

ABS LOCAL NETWORKS HAVE NOW PROGRESSED TO THE POINT WHERE THEY ARE
ABS BECOMING COMMERCIALLY AVAILABLE, AND THIS HAS COME AT THE SAME TIME
ABS AS NATIONAL AND INTERNATIONAL PACKET SWITCHING NETWORKS ARE
ABS BEGINNING TO PROVIDE EASY WIDE-AREA COMMUNICATIONS BETWEEN
ABS COMPUTERS. THIS PARALLEL DEVELOPMENT IS LEADING TO CONFLICTING
ABS REQUIREMENTS WHERE SYSTEMS MUST COMMUNICATE WITH BOTH LOCAL AND
ABS REMOTE SYSTEMS. THIS PAPER LOOKS AT SOME OF THE PROBLEMS RAISED BY
ABS THIS PARALLEL DEVELOPMENT AND CONSIDERS ITS EFFECT ON ELECTRONIC
ABS MAIL AND OTHER LIKELY BUSINESS COMMUNICATIONS. THE STANDARDS BODIES
ABS ARE ALSO WORKING TOWARDS INTERNATIONAL STANDARDS FOR THE
ABS INTERWORKING OF COMPUTERS, AND THE RECENT TELETEX PROPOSALS ARE
ABS ALSO CONSIDERED...TERMINAL PROT-INTERPROCESS PROT-BULK PROT-MAIL
ABS STORE-MULTIPLE COPIES-ADDRESS DOMAIN-
ABS
ABS

NUM 96
TIT SPECIFICATION OF A COMMERCIALLY VIABLE DISTRIBUTED IN-HOUSE NETWORK
AUT P. KNIPPEL;
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.123-141
KEY
KEY
KEY
DAT 05.81
FIR NIXDORF, PADERBORN
DET ---
KAP ---

ABS THE OVERRIDING REQUIREMENT OF THE 'OFFICE OF THE FUTURE' IS FOR THE
ABS EFFICIENT DISTRIBUTION OF INFORMATION TO LOCAL USERS. THE CONCEPT
ABS OF INHOUSE NETWORKS IS MAINLY SEEN AS A LOGICAL STEP FORWARD IN
ABS PROVIDING FAST AND COST-EFFECTIVE DATA DISTRIBUTION. THE ETHERNET-
ABS TECHNOLOGY AS HIGH PERFORMANCE IS A VEHICLE SUITABLE FOR NIXDORF
ABS INHOUSE NETWORK, IN WHICH LOCAL TERMINALS WILL BE ABLE TO TRANSFER,
ABS ACCESS OR UPDATE INFORMATION IN A TRULY SHARED DISTRIBUTED SYSTEM.
ABS THE COMPONENTS OF THE SYSTEM AND A START-UP LIST OF POSSIBLE FUNC-
ABS TIONS ARE REVIEWED WITH SPECIAL REGARD TO THEIR "SERVICES" TO THE
ABS LOCAL NETWORK. VARIOUS FORMS OF NETWORK COMPATIBILITY PROBLEMS ARE
ABS INCLUDED IN THE PLANNING OF THE NETWORK FOR COST-EFFECTIVE EXTERNAL
ABS COMMUNICATIONS AN INTEGRATED CONNECTION TO PUBLIC CIRCUIT SWITCHING
ABS AND PACKED SWITCHING NETWORKS WILL BE NECESSARY. A TRANSITIONAL
ABS STRATEGY IS ESTIMATED TO OPEN UP THE FIELD OF LOCAL NETWORKS WITH
ABS TODAY OFFICE COMPUTERSYSTEMS AS THE STARTING POINT.

NUM 97
TIT TAXONOMY OF LOCAL COMPUTER NETWORKS
AUT J.D. MARKOV
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.143-156
KEY LOCAL COMPUTER NETWORK-APPLICATION-SIZE-MEDIUM-TOPOLOGY-ACCESS CONT
KEY ROL-SHARED CABLE NET-CATV-MULTIACCESS BUS/RING-CENTRAL PACKET SWITC
KEY CIRCIT SWITCHING NET-CLASSIFICATION
DAT 05.81
FIR IBM, USA
DET ---
KAP 2.2

ABS THIS PAPER OFFERS A SET OF GUIDELINES AND EXPLANATIONS TOWARD THE
ABS CLASSIFICATION OF LOCAL COMPUTER NETWORKS. A VARIETY OF EXISTING,
ABS AS WELL AS PROPOSED SYSTEMS, ARE EVALUATED WITH RESPECT TO FUNC-
ABS TIONAL SIMILARITIES AND DIFFERENCES. THROUGH AN EVALUATION OF THIS
ABS SORT, ONE OBJECTIVE IS TO DELINEATE CLASSES OF SYSTEMS BASED ON
ABS SIGNIFICANT PARAMETRIC DIFFERENCES. INCLUDED AMONG THE SYSTEMS ARE
ABS LOW FUNCTION TERMINAL TO COMPUTER HOSTS, COMPUTER-TO-COMPUTER RINGS
ABS AND BUSSES, PACKET SWITCHED MESH NETWORKS, DATA CIRCUIT SWITCHED
ABS TERMINAL TO COMPUTER-HOST SYSTEMS, AND INTEGRATED VOICE/DATA
ABS SWITCHED SYSTEMS. THESE SYSTEMS ARE EXPLAINED AND COMPARED.
ABS TAXONOMY-CENTRAL COMPUTER SYSTEMS-SHARED CABLE NETWORKS-CATV-MULTIA
ABS CCESS BUS-MULTIACCESS RING-CENTRAL PACKET SWITCHED NETWORKS-CIRCUIT
ABS SWITCHED NETWORK-NETWORK CLASSIFIKATION-CONCLUSIONS
ABS
ABS

NUM 98
TIT A COMMUNICATION SWITCH BASED ON HIGH PERFORMANCE LOCAL NETWORK ..
AUT H.L. JESSEN
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.157-174
KEY X.25-ETHERNET-GATEWAY-PUBLIC NETWORK-BSC PAD-DATAGRAM SUBNET-
KEY INTEL MULTIBUS-DISTMON (DISTRIBUTED MONITOR)-HDLC-PERFORMANCE
KEY EVALUATION-ROUTER-MEASURED PERFORMANCE-X.25 ACCESS
DAT 05.81
FIR RC COMPUTER, DENMARK
DET ---
KAP 3.3

ABS THIS PAPER DESCRIBES HOW AN X.25 BASED FRONT-END NETWORK SYSTEM IS
ABS EXTENDED TO INCLUDE AN ETHERNET BASED LOCAL NETWORK SYSTEM,
ABS OFFERING A HOMOGENOUS COMMUNICATION SERVICE WITH BOTH IN-HOUSE AND
ABS LONG-HAUL FACILITIES. THE BASIC HARDWARE AND SOFTWARE STRUCTURE IS
ABS REVIEWED AND SPECIAL EMPHASIS HAS BEEN PUT ON THE PERFORMANCE
ABS ASPECTS. THE INITIAL MEASUREMENTS AND CALCULATIONS INDICATE THAT
ABS LOCAL NETWORK SYSTEMS, IN WHICH FLOW CONTROL AND CREDIT MECHANISM
ABS ARE CAREFULLY ADOPTED, BEHAVE WELL WTIH RESPECT TO PERFORMANCE AND
ABS STABILITY AND IT SEEMS VERY REASONABLE TO ASSUME THAT A DISTRIBUTED
ABS COMMUNICATION SYSTEM WITH CONSIDERABLE CAPACITY CAN BE ESTABLISHED
ABS WITH ETHERNET.
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NUM 99
TIT LOCAL AREA NETWORKS AND THE INTELLIGENT PABX
AUT H. VAN KAMPEN
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.175-184
KEY PABX OLD/NEW-WORKSTATION TO BE SERVED-MEDIUM-STORED PROGRAM CONTROL
KEY SWITCHING MATRICES-TDMA-LAN & PABX-VOICE-DATA-NON VOICE-DTE-HOTLINE
KEY DATAPROTECTION-STORE & FORWARD-SUBSCRIBER-BIS BROADBAND INTERCONN S
DAT 05.81
FIR PHILIPS, NIEDERLANDE
DET PABX
KAP 2.2.5

ABS COMMUNICATIONS FOR THE LOCAL AREA ARE HISTORICALLY PROVIDED BY
ABS PABX'S AND THEIR ASSOCIATED CABLE NETWORKS. NON-VOICE COMMUNICATION
ABS FUNCTIONS ARE ASKED BY THE INCREASING VOLUME OF OFFICE COMMUNI-
ABS CATION EQUIPMENT. CONVENTIONAL PABX'S LACK THE FLEXIBILITY, THE
ABS BANDWIDTH AND THE FULLY AUTOMATIC OPERATION WHICH ARE REQUIRED.
ABS ALTERNATIVE SOLUTIONS ARE PRESENTED IN COAX-, OR FIBER-BASED LOOP-
ABS OR BUS-SYSTEMS. THEY ARE TO BE INSTALLED IN AN ORGANISATION APART
ABS FROM THE TELEPHONE NETWORK. HOWEVER, INTELLIGENT PABX'S CAN ALSO
ABS OFFER COMMUNICATION SERVICES SUPERIOR TO THE SERVICES FROM THEIR
ABS CONVENTIONAL SISTERS. HIGHSPEED DIGITAL SUBSCRIBER LOOPS, DIGITAL
ABS SWITCHING AND PROGRAM CONTROL ARE TECHNOLOGIES RAISING THE APPLI-
ABS CATIONS OF MODERN PABX'S ABOVE THE LEVEL OF PLAIN OLD TELEPHONY.
ABS LAN'S AND INTELLIGENT PABX'S WILL COMPETE AND COMPLETE EACH OTHER.
ABS
ABS

NUM 100
TIT B.I.S - A BROADBAND INTERCOMMUNICATION SYSTEM
AUT G. SEGARRA
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.185-198
KEY BIS-CATV-DTE-BROADBAND-P STATION-V STATION-V24/RS232C-PHIP ACCESS
KEY PROCEDURE-PHIP COMM PROTOCOL-DATA TRANSFER/EXCHANGE-FRAME-PDLC-VDLC
KEY PILU-PILOT-STATION INSERTION/SUPRESSION-SILENT/OVERACTIVE STATION
DAT 05.81
FIR PHILIPS DATA SYSTEMS, PARIS
DET ---
KAP 3.3

ABS THE CATV NETWORK IS USED WITH A PRIMARY OBJECTIVE OF TAKING ADVAN-
ABS TAGE OF MASS PRODUCED AND TESTED TECHNOLOGY PROVIDING MULTIMODE
ABS COMMUNICATIONS (AUDIO, VIDEO, DATA) ON THE SAME CABLE BY FREQUENCY
ABS DIVISION MULTIPLEXING (FDM). TWO DEDICATED FREQUENCY CHANNELS ARE
ABS ALLOTED, ALLOWING A DATA TRANSFER RATE OF 4 MBIT/S OR DATA COMMUNI-
ABS CATION BETWEEN UP TO 1024 PHILIPS COMPUTERS AND DIFFERENT EQUIPMENT
ABS HAVING V24 (RS232) STANDARD INTERFACE. THE REVERSE CHANNEL IS TIME
ABS SHARED (TDM) IN ACCORDANCE WITH A LOGICAL RING ACCESS PROCEDURE
ABS ALLOWING DIRECT COMMUNICATIONS BETWEEN ANY STATIONS WITHOUT FIXED
ABS HIERARCHY, WHEREAS THE FORWARD CHANNEL BROADCASTS DATA RECEIVED ON
ABS THE REVERSE CHANNEL AFTER PASSING THROUGH THE HEADEND OF A FREQUEN-
ABS CY SHIFT. DECENTRALIZED COMMUNICATION PROTOCOLS HAVE BEEN SPECIFIED
ABS TO PROVIDE ERROR DETECTION AND RECOVERY, FLOW CONTROL AND MULTIMODE
ABS ADDRESSING (PHYSICAL AND LOGICAL ADDRESSING MODES). HARDWARE AND
ABS SOFTWARE PRODUCTS ARE NOW UNDER DEVELOPMENT AND TEST.

NUM 101
TIT CARRIER SENSE MULTIPLE-ACCESS WITH FEEDBACK
AUT M.G. GABLE; R.H. SHERMAN
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.199-214
KEY FB/CSMA/CD-FEEDBACK CONTROL-DISTRIBUTED PARAMETER-STATE VARIABLE-
KEY ACCESS-PROPAGATION DELAY-COLLISION-CONTENTION RESOLUTION-BUSY-IDLE-
KEY INTERFERENCE-PACKET-THROUGHT-LOAD-DELAY-CHANNELL CAPACITY-TRAFFIC
DAT 05.81 -SIMULATION
FIR FORD MOTOR COMPANY, USA
DET CSMA
KAP 2.2.6

ABS A LAYERED APPROACH TO THE ACCESS PROTOCOL FOR A SHARED COMMUNICA-
ABS TION CHANNEL IS PRESENTED. A CONTENTION LAYER IS SHOWN TO BE IM-
ABS PROVED BY THE USE OF INFORMATION FEEDBACK FROM CONTENDING PRO-
ABS CESSES. THE IMPROVED CONTENTION LAYER PERMITS GREATER
ABS APPLICABILITY OF LOCAL NETWORKS WITHOUT THE USE OF A HIGHER LAYER
ABS PROTOCOL FOR THE AVOIDANCE OF COLLISIONS. THE NEW CONTENTION
ABS RESOLUTION SHEME, TERMED FB/CSMA/CD, IS SHOWN TO BE BOUNDED IN TIME
ABS (NO DEADLOCK) INDEPENDENT OF THE NUMBER OF PROCESSES SHARING THE
ABS CHANNEL. AN IMPLEMENTATION IS USED TO VALIDATE THE SIMPLICITY AND
ABS OPERATIONAL CORRECTNESS. QUANTITATIVE RESULTS ON THE IMPROVEMENT
ABS ARE DEVELOPED WITH BOTH ANALYTIC AND SIMULATION MODELS. LESS
ABS VARIABILITY IN RESPONSE TIME AND STABLE OPERATION IN LARGE DEMAND
ABS SITUATIONS ARE THE PRINCIPAL PERFORMANCE RESULTS.
ABS
ABS

NUM 102
TIT DESIGN CONSIDERATIONS FOR LARGE MOBILE PACKET RADIO NETWORKS
AUT S.S. LAM
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.215-231
KEY ROUTING ALGORITHM-DISTRIBUTED ADAPTIVE-BROADCAST ROUTING-FIXED ROUT
KEY FIXED ROUTES+FLOODING-THROUGHPUT-AVAILABILTY-SURVIVABILTY-MOBILE
KEY HIERARCHICAL-ADAPTIVITY-CHANNELL ACCESS-CSMA-PRIORITY-FAIRNESS-FLOW
DAT 05.81
FIR UNIVERSITY OF AUSTIN, USA
DET ROUTING
KAP 2.2.9

ABS WE CONSIDER PACKET RADIO NETWORKS THAT ARE LARGE, HAVE A CHANGING
ABS CONNECTIVITY AND SUPPORT MOBILE USERS (KEY ATTRIBUTES). THE PRI-
ABS MARY PERFORMANCE MEASURES ARE THROUGHPUT EFFICIENCY, NETWORK DELAY
ABS AND AVAILABILITY/SURVIVABILITY. FOUR EXISTING ROUTING ALGORITHMS
ABS ARE DESCRIBED AND COMPARED QUALITATIVELY. WE CONCLUDED THAT WITH
ABS THE ABOVE NETWORK ATTRIBUTES, THESE ALGORITHMS CAN PROVIDE EITHER
ABS THROUGHPUT EFFICIENCY OR GOOD AVAILABILITY BUT NONE CAN PROVIDE
ABS BOTH. A HIERARCHICAL NETWORK STRUCTURE AND ROUTING STRATEGY ARE
ABS PROPOSED WHICH CAN CONCEPTUALLY PROVIDE BOTH BY ADAPTING TO THE
ABS NATURE OF THE NETWORK. NETWORK TRANSIT DELAYS MAY ALSO BE IMPROVED
ABS WITH A HIERARCHICAL STRUCUTRE. THE IMPLEMENTATION OF SUCH A NETWORK
ABS ARCHITECTURE REQUIRES SEVERAL CLASSES OF PACKET RADIOS WITH DIFFE-
ABS RENT TRANSMISSION POWER RANGES. WE ALSO ADDRESSED THE DESIGN OF
ABS CHANNEL ACCESS PROTOCOLS AND THE IMPACT OF THIS NETWORK ARCHITECTUR
ABS ON THE DESIGN OF NETWORK ALGORITHMS FOR FLOW AND ERROR CONTROL.

NUM 103
TIT PRESENTATION SERVICE - THE PHILOSOPHY
AUT S. SCHINDLER; U. FLASCHE
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.233-244
KEY PROTOCOL-VIRTUAL DEVICE/INFO/-DEVICE PRESANTATION SERVICE-INFO P S-
KEY FILE-VIRTUAL DEV STORE VDS-CONCEPTUAL D S(CDS)-DEV DATA TYPE DDT-
KEY CDT-OSI-
DAT 05.81
FIR TECHNISCHE UNIVERSITAET, BERLIN
DET ---
KAP 2.2.7.4

ABS FUTURE END SYSTEMS FOR OFFICE AUTOMATION, SO CALLED 'OFFICE WORK-
ABS STATIONS', WILL CONSIST OF A VARIETY OF PRETTY DIFFERENT, BUT INTE-
ABS GRATED DEVICES. THESE DEVICES MAY VARY FROM CHARACTER ORIENTED DIS-
ABS PLAY TERMINALS TO FILE ORIENTED STORAGE DEVICES. THE AIM OF THE
ABS PRESENTATION SERVICE IS TO ALLOW TWO OWS'S TO COMMUNICATE WITH EACH
ABS OTHER, IN A WAY INDEPENDENT OF THE PARTICULAR EQUIPMENT USED IN
ABS THESE TWO OWS'S. THE PRESENTATION SERVICE IS CONSIDERED AS THE
ABS LAYER 6 SERVICE OF THE ISO REFERENCE MODEL. THE PRIMARY CONCERN OF
ABS THIS PAPER IS TO DISCUSS THE ESSENTIALS OF THIS PRESENTATION SER-
ABS VICE AND TO EXPLAIN THE MAIN ALTERNATIVES PRESENTLY BEING CONSIDER-
ABS ED BY STANDARDIZATION EXPERTS. ACCOMPANYING PAPERS GIVE THE DETAIL-
ABS ED SPECIFICATIONS OF THE PRESENTATION SERVICE AND PRESENTATION PRO-
ABS TOCOL WE PROPOSE, AND EXPLAIN THEIR RELATIONSHIP TO VARIOUS OTHER
ABS DOMINATING PROPOSALS.
ABS

NUM 104
TIT PROTOCOLS FOR LOCAL NETWORKS
AUT C.A. SUNSHINE
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.245-261
KEY PROTOCOL-DATAGRAM-VIRTUAL CIRCUIT-BROADCAST-MULTICAST-TERMINAL
KEY SERVICE-ENTITIES-DESIGN-IMPLEMENTATION-SPECIFICATION-VERIFICATION
KEY
DAT 05.81
FIR UNIVERSITY OF SOUTHERN CALIF., USA
DET ---
KAP 2.2.7

ABS SHOULD LOCAL NETWORK PROTOCOLS DIFFER FROM OTHER PROTOCOLS? WE
ABS BELIEVE THE ANSWER IS MAINLY NO, BUT PARTLY YES. AFTER THIS
ABS DISCUSSION, WE CLARIFY THE NOTIONS OF PROTOCOL, SERVICE, AND
ABS IMPLEMENTATION, AND SURVEY THE CURRENT STATE OF THE ART IN PROTOCOL
ABS SPECIFICATION AND VERIFICATION METHODS. TECHNIQUES SUCH AS STATE
ABS MACHINES, FORMAL GRAMMARS, PETRI NETS, AND TEMPORAL LOGIC ARE
ABS PRESENTED. VERIFICATION METHODS INCLUDING STATE EXPLORATION,
ABS SYMBOLIC EXECUTION, PROGRAM PROOF, AND DESIGN RULES ARE COMPARED.
ABS SOME OF THESE MORE FORMAL TECHNIQUES APPEAR TO BE USEFULL AND WELL
ABS ENOUGH UNDERSTOOD TO WARRANT MORE WIDESPREAD USE BY PROTOCOL
ABS DESIGN GROUPS.
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NUM 105
TIT A REAL-TIME PROTOCOL FOR A SUB-LOCAL NETWORK
AUT R. SOMMER
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.263-275
KEY REAL TIME PROTOCOL-SUB LOCAL NETWORK-SWAN-TRANSPORT/DATA LINK LAYER
KEY RELIABLE DATAGRAM SERVICE-FRAMES-VARIABLE BIT RATES-BROADCAST-CSMA
KEY COLLISION ARBITRATION-SDLC FRAME-HARDWARE-LISA-LSI11-Q-BUS-Z80
DAT 05.81
FIR SWISS FEDERAL INSTITUTE OF TECHNOLOGY, LAUSANNE
DET ---
KAP 3.5

ABS A SUB-LOCAL NETWORK IS DEFINED TO BE A LOCAL NETWORK LIMITED IN
ABS TERMS OF ITS RANGE AND THE NUMBER OF ATTACHED STATIONS. DUE TO THE
ABS SMALL NUMBER OF STATIONS (ABOUT 20 TO 50) THE TOTAL CAPACITY OF THE
ABS COMMON COMMUNICATION LINK MAY BE REDUCED. HOWEVER TO GUARANTEE
ABS REASONABLE RESPONSE TIME IN A HIGHLY INTERACTIVE ENVIRONMENT, THE
ABS USER TO USER THROUGHPUT IS KEPT HIGH, NEAR TO THE MAXIMUM OF THE
ABS NETWORK. THIS IS ACCOMPLISHED BY EXECUTING THE TRANSPORT LEVEL
ABS PROTOCOL IN SYNCHRONIZATION WITH THE DATA LINK AND PHYSICAL LAYERS,
ABS THUS IN REAL-TIME DURING A PACKET BROADCAST. AN IMPLEMENTATION OF
ABS SUCH A PROTOCOL IS DESCRIBED WITH REFERENCE TO SWAN
ABS (SINGLE WIRE ADVANCED NETWORK), AN ETHERNET-LIKE NETWORK. SWAN IS
ABS THE SUCCESSOR OF COBUS NOW IN USE SINCE TWO YEARS AT THE SWISS
ABS FEDERAL INSTITUTE OF TECHNOLOGY IN LAUSANNE.
ABS
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NUM 106
TIT BASIC SERVICES FOR A LOCAL NETWORK
AUT V. QUINT; H. RICHY; X. ROUSSET DE PINA; S. SASYAN; G. SERGEANT;..
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.277-288
KEY KAYAK-IMAG-LSI-11-RSX-CSMA/CD-PRESENTATION-TRANSPORT-FILE-MAIL
KEY PROGRAMMER WORKSTATION-DATAGRAM-HB-68-COMMUNICATOR-PASCAL-LIAISON
KEY LETTERGRAM-CLIENT-SERVER-SERVICE-SER-MICROBE-
DAT 05.81
FIR LABORATOIRE IMAG, FRANCE
DET ---
KAP 3.3

ABS THE LOCAL NETWORK INSTALLED AT IMAG IS INTENDED TO BE A SUPPORT FOR
ABS EXPERIMENTING DISTRIBUTED APPLICATIONS AND SYSTEMS, AND ALSO TO
ABS PROVIDE OFFICE SERVICES TO END USERS. THIS PAPER DESCRIBES THE
ABS APPROACH FOLLOWED FOR DESIGNING AND IMPLEMENTING THE BASIC SERVICES
ABS NEEDED BY BOTH TYPES OF APPLICATION. THE NETWORK IS A DANUBE
ABS (ETHERNET-LIKE) NETWORK THAT PRESENTLY CONNECTS SEVEN MICROS AND
ABS MINIS AND ONE MAINFRAME. BASIC NETWORK SERVICES INCLUDE TRANSPORT
ABS SERVICE, FILE TRANSFER, REMOTE PRINTING, ACCESS TO SERVERS,
ABS MAIL SERVICE, AND PROVIDE A HOMOGENOUS SET OF TOOLS FOR
ABS DEVELOPING DISTRIBUTED SOFTWARE, AND ESPECIALLY OFFICE SYSTEMS.
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NUM 107
TIT PREVENTING PROTOCOL TRAPS IN THE DESIGN OF COMPUTER NETWORKS TO ...
AUT W.S. LAI
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.289-301
KEY STORE AND FORWARD DEADLOCK-PROGENY DEADLOCK-REASSEMBLY DEADLOCK-
KEY PRIORITY DEADLOCK-RESEQUENCE DEADLOCK-PIGGIBACKED ALLOCATION DL
KEY PIGGI ACK DL-PACKETIZATION DL-MESSAGE PING PONGING-PAD-VIRTUAL TERM
DAT 05.81
FIR BELL-NORTHERN RESEARCH, OTTAWA, CANADA
DET PAD-ROUTING-SEQUENCING-FLOW CONTROL-
KAP 2.2.7

ABS THIS PAPER IS A COMPENDIUM OF POTENTIAL PROTOCOL "TRAPS" COMPILED
ABS FROM RELEVANT LITERATURE ON COMPUTER NETWORKS. THE DIVERSITY OF
ABS DEADLOCKS AND MESSAGE PING-PONGING CONDITIONS THAT CAN ARISE IN
ABS PACKET NETWORKS IS PRESENTED TOGETHER WITH ASSOCIATED METHODS OF
ABS SOLUTION.
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NUM 108
TIT PROTOCOL MODEL FOR WELNET
AUT J.W. MARK
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.303-317
KEY HDLC CHIP-PROTOCOL-DSMA-RESERVATION RING STRATEGY-RESERVATION BUS
KEY WINDOW FLOW CONTROL-
KEY
DAT 05.81
FIR UNIVERSITY OF WATERLOO, CANADA
DET DSMA
KAP 3.3 - 2.3

ABS THE COMMUNICATION MODEL FOR WELNET, A LOCAL AREA COMMUNICATION NET-
ABS WORK (LACN) DESIGNED FOR SUPPORTING IN-PLANT DATA COMMUNICATION,
ABS HAS A THREE LEVEL HIERARCHICAL PROTOCOL, THE PHYSICAL, DATA LINK
ABS AND NETWORK LEVELS. THE PHYSICAL LEVEL EMPLOYS DSMA AS THE MULTIPLE
ABS ACCESS PROTOCOL. WELNET HAS A BUS TOPOLOGY. EACH TRANSCEIVER IN
ABS WELNET IS SUPPORTED BY A MOTOROLA M6809 MICROPROCESSOR AND A DUAL
ABS (WESTERN DIGITAL) HDLC CHIP. THE HDLC CHIPS SUPPORT THE DATA LINK
ABS PROTOCOL WHILE THE M6809 MANAGES THE NETWORK LEVEL PROTOCOL. THE
ABS NETWORK LEVEL PROTOCOL, WHICH IS END-TO-END FROM TRANSCEIVER-TO-
ABS TRANSCEIVER, OPERATES AS A VIRTUAL CIRCUIT AND USES A WINDOW FLOW
ABS CONTROL STRATEGY.
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NUM 109
TIT THE SERIES/1 DISTRIBUTED OPERATING SYSTEM
AUT W.D. SINCOSKIE; D.J. FARBER
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.319-328
KEY PROTOCOL-UNIX-PROCESS-EXCHANGE-MESSAGE-NETWORK MANAGER-IBM
KEY EXCHANGE MANAGER-USER MEMORY MANAGER-PROCESSOR MANAGER-ROUTING
KEY SYSTEM CALLS-DISTRIBUTED TABLES
DAT 05.81
FIR BELL TELEPHONE LABORATORIES, USA; UNIVERSITY OF DELAWARE, USA
DET ---
KAP 2.2.7

ABS THE SERIES/1 DISTRIBUTED SYSTEM (SODS) PROJECT IS CONCERNED WITH
ABS THE DESIGN AND CONSTRUCTION OF A DISTRIBUTED PROCESSING ENVIRONMENT
ABS THE SODS PROJECT CONSISTS OF THREE MAJOR PARTS: THE OPERATING
ABS SYSTEM (SODS/OS), THE FILE SYSTEM (SODS/FS), AND A LOCAL
ABS COMMUNICATIONS NETWORK. THIS PAPER WILL DESCRIBE SODS/OS, THE
ABS DISTRIBUTED OPERATING SYSTEM FOR THE IBM SERIES/1.
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NUM 110
TIT OPERATING SYSTEM SUPPORT FOR DISTRIBUTED OFFICE INFORMATION SYSTEMS
AUT L. SVOBODOVA
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.329-343
KEY WORKSTATION-AUTOMATED OFFICE
KEY
KEY
DAT 05.81
FIR INRIA, ROCQUENCOURT, FRANCE
DET ---
KAP ---

ABS THE PAPER DESCRIBES A MODEL OF AN OFFICE INFORMATION SYSTEM
ABS ORIENTED TOWARDS IMPLEMENTATION OF SUCH A SYSTEM ON A NETWORK OF
ABS COMPUTERS. THE MODEL CONSISTS OF WORKSTATIONS THAT REPRESENT
ABS KNOWLEDGE AND AUTHORITY DOMAINS, FORMS THAT DEFINE THE INTERFACE
ABS WITH HUMAN WORKERS AND TASKS THAT EMBODY THE CONTROL OF HOW TO USE
ABS THE NETWORK OF WORKSTATIONS IN ORDER TO ACCOMPLISH A PARTICULAR
ABS OFFICE TASK. THE MAIN IMPLEMENTATION ASPECTS EMPHASIZED HERE ARE
ABS RELIABLE LONG TERM STORAGE AND THE ABILITY TO TRACE, ROLL BACK, AND
ABS RESTART A TASK. IT IS ARGUED THAT THE NECESSARY SUPPORT MIGHT BE
ABS BEST PROVIDED WITH THE USE OF SHARED SERVERS, THAT MAY BE THOUGHT
ABS TO BE A PART OF THE NETWORK OPERATING SYSTEM.
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NUM 111
TIT MANAGING DOMAINS IN A NETWORK OPERATING SYSTEM
AUT J.E. DONNELLEY
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.345-361
KEY DISTRIBUTED COMPUTING SYSTEM-INTERPROCESS COMMUNICATION PRIMITIVE
KEY RESOURCE ACCESS CONTROL-ENCRYPTION-PUBLIC KEY ENCRIPTION-
KEY CAPABILITY-PASSWORD-
DAT 05.81
FIR LAWRENCE LIVERMORE NATIONAL LABORATORY, LLL, LIVERMORE, CALIF.
DET ---
KAP 2.2.10

ABS THE NEEDS FOR ECONOMY, RELIABILITY, SECURITY, AND PRIVACY IN DIS-
ABS TRIBUTED INFORMATION SYSTEMS HAVE SUGGESTED THAT SUCH SYSTEMS BE
ABS CONSTRUCTED FROM MODULES OPERATING IN SEPARATE DOMAINS. IDEALLY THE
ABS DOMAIN OF EACH MODULE WOULD PERMIT ACCESS TO ONLY THOSE RESOURCES
ABS NEEDED TO ACCOMPLISH ITS TASK. IN PRACTICE IT HAS PROVED DIFFICULT
ABS TO PROVIDE SUCH PRECISE ACCESS CONTROL. AT THE LEVEL OF PROCESS-TO-
ABS PROCESS COMMUNICATION THERE IS THE THORNY PROBLEM OF DEFINING A
ABS RESOURCE INDEPENDENT PROTOCOL FOR COMMUNICATING RESOURCE ACCESS
ABS (CAPABILITIES). SEVERAL APPROACHES TO THIS PROBLEM ARE DISCUSSED,
ABS INCLUDING A SOLUTION BASED ON PUBLIC KEY ENCRYPTION. AT THE LEVEL
ABS OF HUMAN-TO-PROCESS COMMUNICATION THERE IS A SIMILAR PROBLEM OF
ABS COMMUNICATING ACCESS TO RESOURCES. HERE A PERSON AT A TERMINAL NEED
ABS TO BE ABLE TO INDICATE WHICH RESOURCES SHOULD BE MADE AVAILABLE TO
ABS THE PROCESSES PERFORMING A REQUESTED TASK...
ABS

NUM 112
TIT AMOEBA - A CAPABILITY BASED DISTRIBUTED OPERATING SYSTEM
AUT A.S. TANENBAUM; S.J. MULLENDER
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.363-377
KEY
KEY SEE NUM 4
KEY
DAT 05.81
FIR UNIVERSITY OF AMSTERDAM, NIEDERLANDE
DET ---
KAP 8

ABS AMOEBA IS AN OPERATING SYSTEM DESIGNED TO RUN ON A LARGE COLLECTION
ABS OF HETEROGENEOUS PROCESSORS. THE SYSTEM IS BASED ON THE CONCEPT OF
ABS AN ABSTRACT GENERIC SERVICE, AND IS IMPLEMENTED USING CAPABILITIES.
ABS PROTECTION IS PROVIDED BY MAKING CAPABILITIES SPARSE, SO IT IS SAFE
ABS TO ALLOW USERS TO MANIPULATE THEM DIRECTLY. CONSEQUENTLY NEARLY THE
ABS ENTIRE PROTECTION SYSTEM, FILE SYSTEM, PROCESS MANAGEMENT SYSTEM,
ABS AND TERMINAL HANDLING SYSTEM CAN BE REMOVED FROM THE KERNEL OF THE
ABS OPERATING SYSTEM AND RUN AS ORDINARY USER CODE. THIS PAPER GIVES
ABS AN OVERVIEW OF THE AMOEBA ARCHITECTURE.
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NUM 113
TIT OPERATING AND APPLICATIONS SYSTEM DESIGN OPPORTUNITIES FOR CSMA ...
AUT W.F. ZACHMANN
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.379-389
KEY DESIGN OPPORTUNITIES-DESIGN ADVANTAGES-DRAFIS-DESIGN REQUIREMENTS
KEY DESIGN METHODOLOGY-
KEY
DAT 05.81
FIR INTERNATIONAL DATA CORP., USA
DET ----
KAP ---

ABS LOCAL AREA NETWORKS EMPLOYING CSMA TECHNIQUES ON A COMMON BUS ARE
ABS APPROACHING THE POINT OF BROAD EMPLOYMENT IN USER ORGANIZATIONS.
ABS CSMA BUS NETWORKS, INCLUDING BASEBAND IMPLEMENTATIONS (SUCH AS
ABS XEROX'S ETHERNET) AND BROADBAND SYSTEMS USING RADIO FREQUENCY (RF)
ABS MODULATION ON THE CABLE BUS, HAVE IMPORTANT PROPERTIES NOT PREVI-
ABS OUSLY FOUND IN OLDER NETWORK ARCHITECTURES. THESE PROPERTIES EX-
ABS PAND THE HORIZONS AVAILABLE FOR OPERATING AND APPLICATION SYSTEM
ABS DESIGNERS. TO TAKE ADVANTAGE OF THESE OPPORTUNITIES REQUIRES NEW
ABS AND QUITE DIFFERENT WAYS OF THINKING ABOUT SYSTEM DESIGN. THIS
ABS PAPER PROVIDES AN OVERVIEW OF THE KEY PROPERTIES THAT ARE UNIQUE
ABS (AT LEAST WITH REGARD TO PRACTICAL AVAILIBILITY) TO CSMA BUS NET-
ABS WORKS. IT PRESENTS MATERIAL AND POINTS OF VIEW FELT TO BE HELPFUL
ABS IN REORIENTING APPROACHES TO THE DESIGN OF SYSTEMS USING THESE NET-
ABS WORKS. AND, FINALLY, IT DISCUSSES SELECTED DESIGN OPPORTUNITIES
ABS THAT ARE NOW AVAILABLE.

NUM 114
TIT GATEWAYS FOR INTERCONNECTING LOCAL AREA AND LONG HAUL NETWORKS
AUT W.L. ELDEN
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.391-406
KEY STANDARD-IEEE 802-CCITT X.25-ISO/OSI-X.21-INTERCONNECTION-DTE-DCE
KEY HDLC-MODELL-LAYER-PEER-TO-PEER-CONNECTION TYPE-CONNECTIONLESS-
KEY DATAGRAM-VIRTUAL CIRCUIT-LNDLNC-MA-MAU-DLMAC-X.121-VIRTUALL CALL
DAT 05.81 -PROTOCOL-GATEWAY
FIR HARRIS CORP., MELBOURNE, FLORIDA, USA
DET IEEE 802-X.25-X.21-X.121-ISO-
KAP 6. - 2.2.9

ABS THE GENERAL OFFICE SYSTEMS ENVIRONMENT IS ONE WHICH WILL CONTAIN
ABS MULTIPLE LOCAL AREA NETWORKS AND PUBLIC NETWORKS, REQUIRING INTER-
ABS CONNECTING TOGETHER. WHILE PROGRESS IS BEING MADE TOWARD GREATER
ABS UNIVERSAL STANDARDIZATION (I.E. CCITT X.25 AND IEEE 802) THE
ABS COMPETITIVE MARKETPLACE LEADS TO MULTIPLE INCOMPATIBLE VENDOR NET-
ABS WORKS. THROUGH THE USE OF STANDARD GATEWAYS IT WILL BE POSSIBLE TO
ABS INTERCONNECT TOGETHER MULTIPLE LOCAL AREA AND LONG HAUL NETWORKS
ABS WITH A MINIMUM OF DIFFICULTY. WIDE ACCEPTANCE OF A STANDARD METHOD
ABS IS PROPOSED.
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NUM 115
TIT GATEWAY AND CLUSTER CONTROLLER ARCHITECTURES BASED ON THE ISO RM
AUT T. JACOBSEN
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.407-417
KEYPROTOCOL-GATEWAY-STANDARD-ARCHITECTURE-MODELL-HIGH LEVEL GATEWAY-
KEY TRANSPORT LEVEL GATEWAY-NETWORK LEVEL GATEWAY-MULTIPLEXING-TELETEX
KEY
DAT 05.81
FIR RC COMPUTER A/S, DENMARK
DET TELETEX
KAP 2.2.9 - 6.

ABS THE ISO REFERENCE MODEL FOR OPEN SYSTEMS INTERCONNECTION MAY BE
ABS USED AS A TEMPLATE FOR DESCRIPTION OF NETWORKS, NETWORK INTER-
ABS FACES AND NETWORK GATEWAYS. IN THE PRESENT PAPER THE ISO-OSI MODEL
ABS IS USED AS A TOOL FOR DESCRIBING DIFFERENT GATEWAY ARCHITECTURES
ABS AS A RESULT OF THE TYPE OF NETWORKS INVOLVED, AND TAKES INTO
ABS ACCOUNT THE KIND OF APPLICATIONS TO BE SERVICED. EXAMPLES WILL BE
ABS GIVEN BASED ON THE CCITT TELETEX AND THE ECMA SPECIFICATIONS FOR
ABS THE TRANSPORT LAYER.
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NUM 116
TIT HMINET 2 - A LOCAL X.25 NETWORK CONNECTED TO THE GERMAN PUBLIC ...
AUT B. BUTSCHER
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.419-433
KEY PADX-SIEMENS-DEC-BERNET-STAR-DATEX-P-LAYER 1/2/3/4/5/6/7-ISO-EDX-P
KEY X.25-DIALOGUE-FD-RDA-RJE-RSP-VF-MAD-SERVICES-
KEY
DAT 05.81
FIR HAHN-MEITNER-INSTITUT FUER KERNFORSCHUNG, HMI, BERLIN
DET DATEX-P
KAP 3.3.2

ABS HMINET 2 IS A LOCAL NETWORK IN THE ENVIRONMENT OF A NUCLEAR
ABS RESEARCH INSTITUTE. IT IS BASED ON THE X.25 TECHNOLOGY AND
ABS CONNECTS ABOUT 24 HOSTS. SERVICES AVAILABLE FOR THE INHOUSE USERS
ABS ARE: DIALOGUE SERVICE, REMOTE DATA ACCESS AND FILE TRANSFER BASED
ABS ON A VIRTUAL FILE CONCEPT AND A NETWORK ADMINISTRATION AND MESSAGE
ABS SERVICE. THIS LOCAL NETWORK IS CONNECTED AS A PRIVATE AUTOMATIC
ABS DATA EXCHANGE (PADX) TO THE GERMAN PUBLIC DATA NETWORK. THE PAPER
ABS DESCRIBES THE STRUCTURE OF THE LOCAL AND PUBLIC NETWORK AND THE
ABS TECHNOLOGY OF THE INTERCONNECTION TO THE GERMAN PUBLIC DATA
ABS NETWORK.
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NUM 117
TIT LAN PROTOCOL RESIDENCY ALTERNATIVES FOR IBM MAINFRAME ....
AUT T. STACK
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.435-450
KEY CONFIGURATION-ALTERNATIVES-ARCHITECTURE-SNA-BTAM-VTAM-SDLC-HDLC
KEY FRONT-END-OSI-IMPLEMENTATION-DTE-DCE
KEY
DAT 05.81
FIR NETWORK ANALYSIS CORP., USA
DET SNA
KAP 4.1

ABS LOW RISK IMPLEMENTATION ARCHITECTURES TO PROVIDE IBM MAINFRAME OPEN
ABS SYSTEM INTERCONNECTION TO A LOCAL AREA NETWORK ARE EXAMINED.
ABS EMPHASIS IS GIVEN TO IMPLEMENTATION ARCHITECTURES WHICH OFFER LOW
ABS RISK MIGRATION PATHS FOR A BROAD BASE OF IBM MAINFRAMES. RESIDENCY
ABS ALTERNATIVES FOR THE ISO LAYERS ARE CONSTRUCTED FROM IBM AND THIRD
ABS PARTY HARDWARE/SOFTWARE COMPONENTS. ANALYSIS FOCUSES ON THE NETWORK
ABS TRANSPORT, AND SESSION LAYER RESIDENCY. TECHNICAL, SCHEDULE AND
ABS COST RISKS ASSOCIATED WITH THE ALTERNATIVE IMPLEMENTATION ARCHI-
ABS TECTURES ARE PRESENTED. AN IMPLEMENTATION ARCHITECTURE FOR IBM
ABS MAINFRAME OPEN SYSTEM INTERCONNECTION USING IBM MAINFRAME AND
ABS FRONT-END ("BLUE BOXES") APPEARS TO BE FEASIBLE IF A SEPARATE
ABS LAN X.25 DCE NETWORK ADAPTER IS REALIZEABLE. AT THIS TIME ISO
ABS COEXISTENCE WITH SNA IS MORE LIKELY TO IMPLY CO-RESIDENCE OF TWO
ABS NETWORK ARCHITECTURES THAN TO IMPLY AN INTEGRATED NETWORK
ABS ARCHITECTURE.

NUM 118
TIT A DISTRIBUTED SYSTEM BUILT WITH A CAMBRIDGE RING
AUT D. SWEETMAN
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.451-464
KEY EXCELLENT SERVICES FOR THE USER!!-POLYNET-FILE SERVER-WORKSTATION
KEY PROCESS-DATAGRAM-PORT-CLIENT/SERVER-QUEUE SERVER-FILING-BOOTSTRAPPI
KEY SECURITY-REMOTE ACCESS-
DAT 05.81
FIR LOGICA VTS
DET ---
KAP 3.5

ABS THE PROGRAMMING ENVIRONMENT PROVIDED BY A MODERN MINICOMPUTER
ABS TIMESHARING SYSTEM, SUCH AS UNIX, IS LIKED BY USERS AND IS AN
ABS EFFECTIVE BASE FOR SIMPLE AND WELL-STRUCTURED SOFTWARE SYSTEMS.
ABS IN THIS PAPER WE DISCUSS A DESIGN ORIGINATING IN OUR EXPERIENCE
ABS OF BUILDING A SYSTEM OUT OF MICROCOMPUTERS CONNECTED BY A RING
ABS AND SUPPORTING AN ENVIRONMENT RATHER LIKE THE TIMESHARING SYSTEM.
ABS WE HOPE THAT SUCH A SYSTEM CAN IMPROVE ON THE MINICOMPUTER IN
ABS SUPPORT OF HIGHLY INTERACTIVE WORKSTATIONS, ROBUSTNESS AND
ABS COST-EFFECTIVENESS.
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NUM 119
TIT ORGANIZATION OF VOICE COMMUNICATION ON THE CAMBRIDGE RING
AUT I.M. LESLIE; R. BANERJEE; S.J. LOVE
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.465-474
KEY RING PACKET FORMAT-PBX-DIAL SERVER-TELEPHONE-IDLE-RINGING-DIALING
KEY TALKING-HUNG UP-INTERFACE-CHIP-ULA UNCOMMITTED LOGIC ARRAY-
KEY RING PACKET-
DAT 05.81
FIR UNIVERSITY OF CAMBRIDGE
DET PABX - CAMBRIDGE RING
KAP 3.5

ABS THE PROSPECT OF INTEGRATING VOICE AND DATA TRAFFIC ON A SINGLE
ABS NETWORK IS AN ATTRACTIVE ONE. IT NOT ONLY ALLOWS RESOURCES TO BE
ABS SHARED BUT ALSO OPENS UP MANY POSSIBILITIES IN THE PROCESSING OF
ABS VOICE: MESSAGE SERVICES, VOICE EDITING, COMMENTARY ON DOCUMENTS,
ABS ETC. UNFORTUNATELY THE COST OF CONNECTING ALL THE TELEPHONES IN,
ABS FOR EXAMPLE, AN OFFICE BUILDING, TO A LOCAL NETWORK IS A HINDRANCE
ABS TO SUCH AN INTEGRATION. WE WILL DESCRIBE AN ORGANIZATION WHICH
ABS ATTEMPTS TO SOLVE THIS PROBLEM BY MINIMIZING THE HARDWARE AND
ABS INTELLIGENCE REQUIRED FOR EACH TELEPHONE. A SYSTEM ORGANIZED IN
ABS THIS FASHION IS CURRENTLY BEING IMPLEMENTED ON THE
ABS CAMBRIDGE RING.
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NUM 120
TIT TERMINAL SUPPORT ON THE CAMBRIDGE RING
AUT M.J. RUBINSTEIN; C.J. KENNINGTON; G.J. KNIGHT
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.475-490
KEY TERMINAL MULTIPLEXOR-RING INTERFACE-UMC-Z80-USART-DMA-PDP-11
KEY UNIX-RING PROTOCOL-SINGLE CHARACTER PROTOCOL-BLOCK PROTOCOL-
KEY Z80-MPX-MINI-PACKET-
DAT 05.81
FIR UNIVERSITY COLLEGE LONDON
DET ---
KAP 3.5

ABS WITHIN THE COMPUTER SCIENCE DEP AT UNI COLLEGE LONDON THERE ARE
ABS SEVERAL TIME-SHARING SYSTEMS SERVING A FULL-TIME STUDENT AND
ABS RESEARCH POPULATION EXCEEDING ONE HUNDRED PEOPLE. THERE IS A
ABS REQUIREMENT TO FLEXIBLY INTERCONNECT THE DEP'S 75 TERMINALS TO 19
ABS COMPUTERS WHICH RANGE IN SIZE FROM MICROPROCESSORS TO PDP-11/44.
ABS THE Z80-MICROPROCESSOR BASED TERMINAL MULTIPLEXORS USE PRINTED
ABS CIRCUIT BOARDS DEVELOPED WITHIN THE DEP TO CONNECT TO A
ABS CAMBRIDGE RING LOCAL NETWORK. COMMUNICATIONS PROTOCOLS HAVE BEEN
ABS DESIGNED AND IMPLEMENTED TO CATER EFFICIENTLY FOR BOTH BLOCK AND
ABS SINGLE CHARACTER RING TRAFFIC. THE PRINCIPLES BEHIND THE PROTOCOLS
ABS DEVELOPED AND THE PERFORMANCE CHARACTERISTICS OF THE TOTAL SYSTEM
ABS ARE DISCUSSED.
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NUM 121
TIT APPLYING MICRO-COMPUTERS IN A LOCAL AREA NETWORK
AUT T.E. SCHUETT; P.H. WELCH
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.491-501
KEY CAMBRIDGE RING-P-CODE-WD/90 MICROENGINE-FILE SERVER-PRINTER SERVER
KEY COMPILER SERVER-PASCAL-NATIVE CODE GENERATOR-MULTI SERVER-DYNAMIC
KEY SERVER-SERVICE-
DAT 05.81
FIR TECHNISCHE UNIVERSITAET, MUENCHEN; UNIVERSITY OF KENT
DET ---
KAP 3.5

ABS THE CONTINUING DEVELOPMENT OF CHEAP MICRO-PROCESSORS WILL REVOLU-
ABS TIONISE THE ORGANISATION OF CENTRALISED FACILITIES OVER THE NEXT
ABS DECADE. INSTEAD OF A LARGE GENERAL PURPOSE COMPUTER OFFERING WIDELY
ABS DIFFERENT SERVICES THROUGH A MASSIVELY COMPLEX TIME-SHARING AND
ABS BATCH-PROCESSING OPERATING SYSTEM, IT WILL BECOME ECONOMIC TO USE A
ABS SET OF SMALLER MACHINES, EACH WITH ITS OWN COMMUNICATIONS HANDLER
ABS AND EACH ONE TAILORED FOR SOME PARTICULAR SERVICE. THESE MACHINES
ABS COULD BE OF COMPLETELY DIFFERENT TYPES BUT WOULD COMMUNICATE FREELY
ABS AND QUICKLY WITH EACH OTHER THROUGH WIDE BAND RATE LINKS SUCH AS
ABS ARE PROVIDED BY THE CAMBRIDGE RING. THE WD/90 PASCAL MICROENGINE IS
ABS AN EXAMPLE OF A CHEAP MACHINE THAT COULD BE DEDICATED TO A SPECIA-
ABS LISED TASK. THIS PAPER DESCRIBES THE DEVELOPMENT OF PORTABLE SOFT-
ABS WARE TO HANDLE THE COMMUNICATIONS FOR SUCH MACHINES, TOGETHER WITH
ABS PRELIMINARY PERFORMANCE FIGURES, APPLICATIONS AND IMPLICATIONS OF
ABS SUCH NETWORKS.

NUM 122
TIT DEVELOPMENTS OF THE CAMBRIDGE RING AT THE UNIVERSITY OF KENT
AUT E.B. SPRATT
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.503-518
KEY KENT RING=SERVICE RING+ENGINEERING RING-ICL2960-PDP11-VAX-TCP-
KEY PSS GATEWAY-SAMPLE RING TERMINAL SESSION-UNIX-ONYX-ONIX-EMAS-
KEY TERMINAL CONCENTRAROR-DISTRIBUTION RING-GATEWAY BRIDGE-BSP-PSS-BBP
DAT 05.81
FIR UNIVERSITY KENT, ENGLAND
DET ---
KAP 3.5

ABS THE PAPER DESCRIBES THE CAMBRIDGE RING NETWORK AT THE UNIVERSITY
ABS OF KENT CONCENTRATING ON DEVELOPMENTS OVER THE LAST TWELVE MONTHS.
ABS THE MAIN AREAS COVERED ARE RELIABILITY AND MAINTENANCE, THE
ABS LINKUP WITH WIDE AREA NETWORKS, TERMINAL CONCENTRATORS, A USER
ABS VIEW OF THE SYSTEM, EXTENDING THE RING, ADDING HOSTS AND
ABS CONCLUDES WITH A NOTE ON FUTURE PLANS.
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NUM 123
TIT EXPERIMENTS IN USER INTERFACE DESIGN FOR OFFICE WORKSTATIONS
AUT G.F. COULOURIS; M.G. LAMMING
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.519-530
KEY INTEGRATED SYSTEM-FUNCTIONALLY INTEGRATED WORKSTATION-BITMAP-SPEECH
KEY WORD PROCESSOR-INTERACTIVE CONTEXT MANAGER-PERFORMANCE REQUIREMENTS
KEY IMAGE TRANSMISSION-SOFTWARE ARCHITECTURE
DAT 05.81
FIR QUEEN MARY COLLEGE, ENGLAND
DET ---
KAP ---

ABS SOME EXPERIMENTS IN THE DESIGN OF INTERACTIVE OFFICE INFORMATION
ABS SYSTEMS ARE DESCRIBED. THE DESIGN METHODOLOGY USED IS BASED ON THE
ABS CONSTRUCTION OF AN 'ACTIVITY MODEL' DESCRIBING THE INFORMATION
ABS PROCESSING ACTIVITIES TO BE PERFORMED AND THE INFORMATION STRUC-
ABS TURES ON WHICH THEY OPERATE. ACTIVITY MODELS ARE OUTLINED FOR TWO
ABS KINDS OF OFFICE INFORMATION SYSTEM; A WORD PROCESSOR AND AN
ABS INTERACTIVE FILING SYSTEM. AN EXPERIMENTAL SYSTEM DEVELOPED AT
ABS QMC FOR THE MANAGEMENT OF OFFICE INFORMATION AND ASSOCIATED TASKS
ABS IS DESCRIBED. THE EXPERIMENTAL SYSTEM USES AN 'ANIMATED DESKTOP'
ABS BASED ON A NOVEL COLOUR DISPLAY SYSTEM. THE MINIMUM HARDWARE AND
ABS SYSTEM SOFTWARE SPECIFICATIONS REQUIRED FOR THE IMPLEMENTATION OF
ABS SUCH MODELS ARE THEN DERIVED FROM CONSIDERATIONS OF THE USER
ABS INTERFACE.
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NUM 124
TIT A WORKSTATION USER INTERFACE WITH A MINIMAL COMMAND SET
AUT P. SCHICKER
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.531-542
KEY COMMON COMMAND SET FOR DIFFERENT CATEGORIES OF INFORMATION-VEMF-
KEY VIEWING-EDITING-MARKING-FILTERING-OPEN-CREATE-QUIT-END-SAVE-CONTEXT
KEY FILE-DIRECTORY-INSERT/DELETE LINE-MAIL-MESSAGE-DESTINATION-CONTENT
DAT 05.81
FIR ZELLWEGER USTER AG, SCHWEIZ
DET ---
KAP ---

ABS A USER INTERFACE FOR A PERSONAL WORKSTATION IS PRESENTED. IT IS
ABS SHOWN HOW THE SAME BASIC TEXT MANIPULATION COMMANDS ARE USED TO
ABS MAINTAIN UNSTRUCTURED TEXT DATA AS WELL AS STRUCTURED DATA, I.E.,
ABS THE TEXT MANIPULATION PROCEDURES INCLUDE FORM-FILING CAPABILITIES.
ABS A HIERARCHICAL DIRECTORY STRUCTURE IS ASSUMED WHERE DIRECTORIES ARE
ABS PRESENTED AS PRE-DEFINED FORMS; HENCE, NO FURTHER COMMANDS ARE NEC-
ABS ESSARY FOR THE MANIPULATION OF DIRECTORIES. THE SAME BASIC COMMAND
ABS SET ALSO ALLOWS A USER TO CREATE, SEND, AND RECEIVE PERSONAL AND
ABS ADMINISTRATIVE MESSAGES. THE USER WORKS WITHIN A SET OF CONTEXTS
ABS AND THE COMMANDS PROVIDE THE USER WITH SMOOTH TRANSITIONS FROM ONE
ABS CONTEXT TO ANOTHER. SIMILARLY, INFORMATION CAN BE MOVED OR COPIED
ABS WITHIN ONE CONTEXT OR ACROSS CONTEXT BOUNDARIES EASILY.
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NUM 125
TIT IMPACT OF MICROPROC ARCHITECTURES ON PERFORMANCE OF LAN ADAPTORS
AUT T. LISSACK; B. MEGLARIS; H. CHIN
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.543-560
KEY BUS INTERFACE UNIT BIU-CSMA/CD-DTE-TERMINAL INTERF UNIT TIU-TRU
KEY TRANSCEIVER INTERF UNIT-PHISICAL LEVEL-LINK LEVEL-CPU-BUS-QUEUEING
KEY MODEL-POLLING MEHANISM-DMA-USART-CPU PROCESSING-DELAY-TERMINAL RATE
DAT 05.81
FIR NETWORK ANALYSIS CORP, USA; NEW YORK INSTITUTE OF TECHNOLOGY, USA
DET ADAPTOR ARCHITECTURE
KAP ---

ABS THE PURPOSE OF THIS PAPER IS TO ANALYZE THE INTERNAL STRUCTURE OF
ABS LOCAL NETWORK INTERFACE UNITS, AND EVALUATE THE CONTRIBUTION OF
ABS PROCESSING DELAYS TO OVERALL END-TO-END PACKET DELAYS. THE INTER-
ABS FACE UNIT IS DIVIDED INTO TWO BASIC STAGES: TIU (SERVICING SOME
ABS LOW SPEED SERIAL PORTS) AND TRU (CONNECTING TIU PARALLEL CPU BOARDS
ABS TO THE LOCAL NETWORK VIA CSMA/CD ON THE CABLE SIDE). TWO BASIC
ABS ARCHITECTURES ARE MODELED. UNDER THE FIRST, THE TRU IS EQUIPPED
ABS WITH A MICROPROCESSOR CPU PERFORMING MOST OF LINK LEVEL PROTOCOLS.
ABS UNDER THE SECOND, THE TRU PERFORMS PHYSICAL LEVEL FUNCTIONS AND
ABS ADDRESS FILTERING, WHEREAS LINK LEVEL PROTOCOLS ARE THE RESPONSIBI-
ABS LITIES OF THE TIU'S. QUEUEING NETWORK MODELS ARE USED TO ENCAPSULAT
ABS THE 2 ARCHITECTURES AND PERFORM COMPARATIVE TRADE-OFF STUDIES ON
ABS THEIR THROUGHPUT/DELAY PERFORMANCE AND SENSITIVITY TO VARIOUS DE-
ABS SIGN PARAMETERS.
ABS

NUM 126
TIT THE OLIVETTI NETWORK MONITOR
AUT P.A. KIDD; M. MAZZOLA
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.561-572
KEY ETHERNET-NETWORK ACTIVITY-OLIVETTI BCS NETWORK-Z80-DMA-FILTERING
KEY HIGH SPEED-PACKET-RAM-FIFO
KEY
DAT 05.81
FIR CENTRO STUDI OLTECO, IVREA, ITALIEN
DET ---
KAP ---

ABS THE MONITORING OF GEOGRAPHIC COMMUNICATIONS NETWORKS HAS BEEN A
ABS NECESSARY PART OF THEIR DEVELOPMENT. LOCAL NETWORKS HOWEVER,
ABS PRESENT SIGNIFICANT DIFFERENCES NOT ONLY IN REGARD TO SPEED AND
ABS SCALE, BUT ALSO IN THE MODE OF ACCESS AND THE LACK OF CENTRALISED
ABS CONTROL. THE EFFECTS OF THESE DIFFERENCES ARE EXAMINED AND A
ABS PHILOSOPHY OF MONITORING IS DEVELOPED. FROM THIS POINT OF VIEW
ABS THE DESIGN OF A MONITORING SYSTEM FOR THE OLIVETTI LOCAL NETWORK IS
ABS DESCRIBED. THE MONITORING UNIT IS CONSTRAINED BY THE NEED TO BE
ABS PHYSICALLY COMPATIBLEWITH THE OTHER NETWORK INTERFACES, SO THAT AN
ABS ECONOMY IN SPECIALISED HARDWARE HAS TO BE MADE. FINALLY, FUTURE
ABS DEVELOPMENTS IN THIS AREA ARE DISCUSSED.
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NUM 127
TIT THE EUROPEAN MARKET FOR LOCAL AREA NETWORKS
AUT D. FLINT
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.573-590
KEY COMPONENTS OF AN INSTALLATION-STATION-DEVICES-PRICE-ROLE-FORECAST
KEY RESOURCE SHARING-INTER-WORKING-LOCAL CONNECTION-NETWORK ARCHITECTUR
KEY LAN SELECTION-INVESTMENT-LARGE/MEDIUM SITES-ICBX-DP SITES-SWITCHES
DAT 05.81
FIR BUTLER COX & PARTNERS, ENGLAND
DET MARKT
KAP 2.0 - 2.2.2

ABS THE NATURE OF LOCAL AREA NETWORK PRODUCTS AND OF THE MARKET ARE
ABS CONSIDERED. THE SELECTION OF A LOCAL NETWORK IS THEN DESCUSSED
ABS FROM THE PERSPECTIVE OF A COMMERCIAL ORGANISATION.
ABS THE PAPER THEN DEVELOPS SOME ESTIMATES OF THE SIZE OF THE EUROPEAN
ABS MARKET FROM A CONSIDERATION OF TRENDS IN COMPUTER USAGE AND IN THE
ABS PRICING OF NETWORK COMPONENTS.
ABS IT IS STRESSED THAT THE TRUE SIGNIFICANCE OF LOCAL AREA NETWORKS
ABS LIES IN THE OPPORTUNITIES THEY CREATE FOR NEW APPROACHES TO SYSTEMS
ABS DESIGN - NOT IN THE VALUE OF THE MARKET.
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NUM 128
TIT A STATUS REPORT ON THE IEEE PROJECT 802 LOCAL NETWORK STANDARD
AUT G.J. CLANCY
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.591-609
KEY IEEE 802-LAN-DLMAC-MEDIA-GOALS-LAYER-ISO-PROTOCOL-BASEBAND-FIBER
KEY BROADBAND-MAU-CSMA-TOKEN-DATA LINK-STANDARD-FRAME-BUS-RING-MAC-
KEY LNDLC-DTE-DCE-DIX-COAX-DEMAND WINDOW-CATV-
DAT 05.81
FIR HONEYWELL INFORMATION SYSTEMS, USA
DET IEEE 802
KAP 2.3 - 6

ABS THIS PAPER DESCRIBES THE STATUS OF THE IEEE LOCAL NETWORK
ABS STANDARDS COMMITTEE (PROJECT 802) AS OF THE COMPLETION OF ITS
ABS FEBRUARY, 1981 MEETING. A HISTORY OF THE COMMITTEE AND AN OVERVIEW
ABS OF THE EMERGING STANDARD ARE GIVEN. INCLUDED ARE DETAILS CONCERNING
ABS THE STRUCTURE OF THE STANDARD, THE DATA LINK CONTROL AND THE MEDIA
ABS ACCESS MECHANISMS. THE GOALS OF THE COMMITTEE ARE ALSO DISCUSSED.
ABS THE AUTHOR CHAIRS THE DATA LINK AND MEDIA ACCESS CONTROL
ABS SUBCOMMITTEE OF IEEE PROJECT 802.
ABS MEDIA/DLMAC DATALINK & MEDIA ACCESS CONTROL/HIGH LEVEL INTERFACE
ABS DEF:LAN/COEXISTENCE/COMM/DETERMINISM - DLMAC GOAL: HDLC CONVERGENCE
ABS TRANSPARENCY TO TOPOLOGY+TRANSMISS RATE+MEDIA -SCOPE: LAYER 0/1/2
ABS DATA LINK: FRAME STRUCTURE(COMPARE HDLC)/ADDRESSING/CLASSES OF
ABS PROCEDURES/TYPE 1/2 SERVICES(DATAGRAM/"VIRTUAL CIRCUIT")
ABS MEDIA ACCESS CONTROL: CSMA/CD - TOKEN ACCESS (DEMAND WINDOW)
ABS CURRENT STATUS

NUM 129
TIT PACKET COMMUNICATION NETWORKS FOR BROADBAND COAXIAL CABLE
AUT K.J. BIBA
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.611-625
KEY MIDSPLIT/SUBSPLIT/DUAL CABLE-RF MODEMS/AGILITY-COAX OUTLET/
KEYF FITTING-NARROWBAND PCU=TBOX+TMUX//8BIT=Z80A-16BIT=8086-
KEY -PACKET COMMUNICATION UNIT-GATEWAY/BRIDGE-X.25/BSC/SDLC-
DAT 05.81
FIR SYTEK, SUNNYVALE, CALIF, USA
DET 5*2MB/S+100*128KB/S-STANDARD LSI HDLC COMPONENTS-
KAP 3.4.3

ABS BROADBAND RF TRANSMISSION OFFERS UNIQUE AND SUBSTANTIAL FUNCTIONAL,
ABS PERFORMANCE AND OPERATIONAL ADVANTAGES AS THE BASIS FOR AN
ABS INTEGRATED LOCAL DATA COMMUNICATIONS NETWORK. UTILIZING INDUSTRY
ABS STANDARD BIDIRECTIONAL CABLE TELEVISION (CATV) DATA DISTRIBUTION
ABS FACILITIES IN COMBINATION WITH A PACKET SWITCHING PROTOCOL ARCHI-
ABS TECTURE AND DISTRIBUTED NETWORK INTELLIGENCE, A BROADBAND NETWORK
ABS CAN PROVIDE HIGH BANDWIDTH, RELIABLE DIGITAL COMMUNICATIONS FOR THE
ABS LOW-COST INTERCONNECTION OF A WIDE RANGE OF USER EQUIPMENTS OVER A
ABS WIDE GEOGRAPHIC AREA. THIS PAPER EXAMINES SOME OF THE UNIQUE
ABS PROPERTIES OF BROADBAND COAXIAL CABLE AND DESCRIBES A COMMERCIAL
ABS LOCAL NETWORK, LOCALNET, THAT EXPLOITS THESE FEATURES.
ABS
ABS KEY DISTRIBUTION CENTER/KDC-SPECIAL SERVICES: PACKETIZED VOICE/
ABS DIGITAL IMAGERY/TELECONFERENCING/INDUSTRIAL CONTROL-
ABS

NUM 130
TIT DISTRIBUTED OFFICE SYSTEMS IN PRACTICE
AUT N. NAFFAH
QUE PROC LOC NETWORKS&DISTR OFFICE SYS, LONDON, MAI 1981, S.627-641
KEY WORKSTATION-FRIENDLY INTERFACE-SERVICE-BUROVISEUR-TARO-DANUBE-PLUME
KEY LIAISON-LETTERGRAM-BROADCAST-KAYAK-SIMPLICITY-ADAPTIBILTY-COHERENCE
KEY FLEXIBILITY-TELEPHONE-MAIL-DIARY-VITRAIL-MULTIWINDOW SCREEN-AGORA-
DAT 05.81
FIR INRIA-ADI, LE CHESNAY, FRANKREICH
DET ---
KAP 3.3

ABS THE APPROACHES WHICH HAVE BEEN ADOPTED UNTIL NOW BY VENDORS FOR
ABS INSTALLING OFFICE SYSTEMS MAY BE QUALIFIED BY "ONE-SERVICE-AT-
ABS A-TIME". WE BELIEVE THAT THE NEXT GENERATION OF OFFICE SYSTEMS
ABS WILL BE MORE INTEGRATED. SERVICES WILL BE DEFINED ALL TOGETHER, AND
ABS WILL INCLUDE MORE SOPHISTICATED FUNCTIONS. IN ORDER TO ACCESS THOSE
ABS SERVICES, USERS WILL HAVE VERY POWERFUL WORKSTATIONS WHICH WILL BE
ABS ABLE TO INTERACT SIMULTANEOUSLY WITH A SET OF APPLICATIONS. IN
ABS THIS PAPER, WE PRESENT THE RESULTS OF OUR EXPERIENCE, IN THE KAYAK
ABS PROJECT AT INRIA. WE ARE CURRENTLY BUILDING A PROTOTYPE OF A
ABS DISTRIBUTED OFFICE SYSTEM CORRESPONDING TO THE NEXT GENERATION,
ABS MENTIONED ABOVE, AND INTEGRATING A SET OF COMPATIBLE SERVICES
ABS OFFERED THROUGH NEW WORKSTATIONS AND SERVERS CONNECTED BY LOCAL
ABS NETWORK.
ABS
ABS

NUM 131
TIT CONFIGURATION-DEPENDENT PERFORMANCE OF A PRIORITIZED CSMA NETW
AUT W.B. WATSON
QUE COMPUTER, 1981, HEFT 2 (FEBRUAR), S.51-58
KEY DELAYED/UNDELAYED CSMA (HC/ETHER) - BURST MODE -MULTIPLEX MODE-
KEY INTERHOST TRANSMISSION-DISCRETE EVENT SIMULATION-ADAPTOR-TRUNK-
KEY LOAD-THROUGHPUT-DELAY-LEVEL TWO PROTOCOL-NSC-PERFORMANCE-QUEUE
DAT 02.81
FIR LAWRENCE LIVERMORE NATIONAL LABORATORY, LLL, USA
DET HYPERCHANNEL ACCESS PROTOCOL
KAP 3.1.1 - 5

ABS THE INTERACTION OF NODE PLACEMENT AND CONTENTION MECHANISM IS
ABS CRUCIAL TO NETWORK PERFORMANCE. THESE EXPERIMENTS SUGGEST THAT
ABS ELABORATE CONTENTION SCHEMES HAVE BUT LITTLE ADVANTAGE OVER
ABS SIMPLE ONES.
ABS EXPERIMENTAL CONDITIONS & DEFINITIONS -RESULTS: THROUGHPUT/DELAY
ABS STABILTY -
ABS
ABS "...ELABORATE CONTENTION MECHANISMS, SUCH AS THOSE EMPLOYED IN
ABS HYPERCHANNEL AND LOOSELY COUPLED NETWORK, HAVE VERY LITTLE
ABS ADVANTAGE OVER THE MUCH SIMPLER ETHERNET SCHEME..."
ABS
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NUM 132
TIT ANALYSIS AND PERFORMANCE EVALUATION OF HYPERCHANNEL ACCESS ...
AUT O. SPANIOL
QUE ---
KEY LEVEL 1 ACCESS PROTOCOL-CONFLICT FREE PRIORITY SCHEDULING-TIMER
KEY ACK-CARRIER SENSING-TOTAL/FIXED DELAY-SYSTEM STATES-MARKOV CHAIN
KEY MODEL-SEMI-MARKOV PROCESS-THROUGHPUT-LAMBDA-FAIR HYPERCHANNEL
DAT 07.81
FIR UNIVERSITAET FRANKFURT
DET HYPERCHANNELL ACCESS PROTOCOL - SLOTTED ETHERNET
KAP 2.2.6 - 3.1.1 - 5.

ABS HYPERCHANNEL IS A LOCAL NETWORK CONFIGURATION WITH RANDOM ACCESS
ABS TO THE GLOBAL TRANSMISSION MEDIUM AND WITH 'CARRIER SENSE'
ABS TECHNIQUES. CONFLICTS ARE RESOLVED BY A FIXED PRIORITY SCHEDULING
ABS OF RETRANSMISSIONS. THIS PAPER PRESENTS A PERFORMANCE EVALUATION
ABS OF HYPERCHANNEL ACCESS PROTOCOLS FOR DIFFERENT TYPES OF USER
ABS SYSTEMS. ANALYTICAL RESULTS AND ASYMPTOTIC RELATIONS ARE OBTAINED
ABS FOR THE THROUGHPUT OF HYPERCHANNEL UNDER DIFFERENT LOAD CHARAC-
ABS TERISTICS. THE FIXED PRIORITY RULE FOR RETRANSMISSIONS DISCRIMI-
ABS NATES AGAINST LOW PRIORITY USERS; A MODIFICATION OF THE ACCESS
ABS SCHEME ('FAIR HYPERCHANNEL') IS PROPOSED WHICH COMPENSATES FOR THIS
ABS UNDESIRABLE EFFECT. THE PERFORMANCE OF THIS NEW PROTOCOL VERSION IS
ABS ALSO EVALUATED. IN A FINAL SECTION, THE ACCESS SCHEMES OF
ABS HYPERCHANNEL ARE COMPARED WITH SIMILAR ACCESS PROTOCOLS.
ABS
ABS

NUM 133
TIT HYPERCHANNEL AT THE NATIONAL CENTER FOR ATMOSPHERIC RESEARCH ...
AUT ---
QUE ---
KEY BEFOR-AFTER-SEL-CRAY-TIMESHARE - FRONT-END-PDP-11
KEY
KEY
DAT ---
FIR NCAR
DET ---
KAP 3.1.1

ABS GIANT COMPUTERS ARE A CRITICAL PART OF THE SCIENTIFIC DATA
ABS GATHERING AND RESEARCH AT THE NATIONAL CENTER OF ATMOSPHERIC
ABS RESEARCH AT BOULDER, COLORADO. THIS IS THE STORY OF HOW
ABS NETWORK SYSTEMS CORPORATION'S NETWORKING CONCEPT IS HELPING MAKE
ABS THESE COMPUTERS MORE USEFUL AND MORE ACCESSIBLE TO SCIENTISTS
ABS AND TECHNICIANS.
ABS
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NUM 134
TIT THE USER INTERFACE TO THE CAMBRIDGE MODEL DISTRIBUTED SYSTEM
AUT A. HERBERT
QUE PROC OF THE 2ND INTL CONF ON DISTRIBUTED COMPUTING SYS PARIS,S.503F
KEY NAME SERVER-PRINTING SERVER-FILE SERVER-TERMINAL CONCENTRATOR-VTP-
KEY VIRTUAL TERMINAL CONNECTION-BSP-BYTE STREAM PROTOCOL-PROCESSOR BANK
KEY SESSION MANAGER-MAINTANANCE-DEBUGGINGCMDS-ANCILLA-Z80-LSI4-
DAT 04.81
FIR UNIVERSITY OF CAMBRIDGE, ENGLAND
DET ---
KAP 3.5

ABS THIS PAPER DESCRIBES THE ALLOCATION OF UNCOMMITTED COMPUTERS TO
ABS USERS IN THE CAMBRIDGE MODEL DISTRIBUTED SYSTEM. THE SCHEME IS AN
ABS ALTERNATIVE TO THE 'COMPUTER IN EVERY OFFICE' APPROACH TO DISTRI-
ABS BUTED COMPUTING. THE CMDS MECHANISMS ARE FLEXIBLE IN AN ENVIRONMENT
ABS OF HETEROGENEOUS MACHINES AND ARE ECONOMIC IN TERMS OF THE HARDWARE
ABS RESOURCES REQUIRED TO SUPPORT A USER COMMUNITY. FURTHERMORE, THE
ABS CMDS SERVICES FOR ORGANISING UNCOMMITTED MACHINES ENCOURAGES THE
ABS IMPLEMENTATION OF DISTRIBUTED COMPUTATIONS RUNNING ON SEVERAL
ABS MACHINES. IF SOFTWARE RUNNING IN AN UNCOMMITTED MACHINE FAILS, THE
ABS MECHANISMS CONTROLLING THE USE OF SUCH MACHINES MAY BE USED AS A
ABS FRAMEWORK FOR AUTOMATICALLY CONTACTING DISTRIBUTED DEBUGGING
ABS SERVICES.
ABS
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NUM 135
TIT COMPONENTS OF A NETWORK OPERATING SYSTEM
AUT J. DONNELLEY
QUE COMPUTER NETWORKS, 1979, HEFT 3, S.389-399
KEY MESSAGE-PROTOCOL-RESOURCE-PROCESS-CRAY-OCTOPUS-MONITOR-FILE SYSTEM
KEY NETWORK OPERATING SYSTEM-DISTRIBUTED-SEMAPHOR SERVER-CDC-
KEY RESOURCE SHARING-BUFFER TABLE
DAT 10.79
FIR LAWRENCE LIVERMORE LABORATORY, LIVERMORE, CALIF., USA LLL
DET ---
KAP 3.1.1

ABS RECENT ADVANCES IN HARDWARE INTERCONNECTION TECHNIQUES FOR LOCAL
ABS NETWORKS HAVE HIGHLIGHTED THE INADEQUACIES IN EXISTING SOFTWARE
ABS INTERCONNECTION TECHNOLOGY. THOUGH THE IDEA OF USING A PURE MESSAGE
ABS PASSING OPERATING SYSTEM TO IMPROVE THIS SITUATION IS NOT A NEW ONE
ABS IN THE ENVIRONMENT OF A MATURE HIGH SPEED LOCAL NETWORK IT IS AN
ABS IDEA WHOSE TIME HAS COME. A NEW TIMESHARING SYSTEM BEING DEVELOPED
ABS AT THE LLL IS A PURE MESSAGE PASSING SYSTEM. IN THIS SYSTEM, ALL
ABS SERVICES THAT ARE TYPICALLY OBTAINED DIRECTLY BY A SYSTEM CALL
ABS (READING AND WRITING FILES, TERMINAL I/O, CREATING AND CONTROLLING
ABS OTHER PROCESSES, ETC.) ARE INSTEAD OBTAINED BY COMMUNICATING VIA
ABS MESSAGES WITH SYSTEM SERVICE PROCESSES (WHICH MAY BE LOCAL OR
ABS REMOTE). THE MOTIVATION FOR THE DEVELOPMENT OF THIS NEW SYSTEM AND
ABS SOME DESIGN AND IMPLEMENTATION FEATURES NEEDED FOR ITS EFFICIENT
ABS OPERATION ARE DISCUSSED.
ABS

NUM 136
TIT XEROX ETHERNET PRODUKTFAMILIE (PROSPEKTE)
AUT ---
QUE VORFUHRUNG IM ZAM 17.5.82
KEY XEROX 8000-8010-MAUS-8011-XEROX-860-DATEI SERVER-8040-DRUCK SERVER
KEY 8071 KOMMUNIKATIONS SERVER-873 MULTIPLEXER-3270 EMULATION-PREISLISTE-8032
KEY 820 TISCHCOMPUTER-8030-WORKSTATION-MAUSE-GRAFIK-SIEMENS-KONTAKTPERSON
DAT 5.82 DATEI SERVER-INTERLAN ETHERNET UNIBUS/QBUS CONTROLLER-NI1010
FIR XEROX
DET ETHERNET
KAP 3.2.1

ABS PROSPEKTE MIT DETAILIERTEN PRUDUKTBESCHREIBUNGEN DER FAMILIE
ABS
ABS LANK-72: PRODUKTBESCHREIBUNG INTERLAN UNI/QBUS ETHERNET CONTROLLER
ABS +DRIVERS
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NUM 137
TIT LCN - A LOOSELY COUPLED NETWORK SYSTEM
AUT L.H. SCHIEBE
QUE NATIONAL COMPUTER CONFERENCE 1980, S.135-138
KEY NAD-TRUNK-NETWORK ACCESS DEVICE-TRUNK CONTROL UNIT TCU-
KEY DEVICE INTERFACE-TRUNK SEND-TRUNK RECEIVE-FLOW CONTROL-CONTROLWARE
KEY
DAT 01.80
FIR CONTROL DATA CORP, MINNESOTA, USA
DET ---
KAP 3.1.2

ABS THE CONTROL DATA LOOSELY COUPLED NETWORK SYSTEM PROVIDES A
ABS MECHANISM TO INTERCONNECT MANY DEVICES (COMPUTERS AND PERIPHERALS)
ABS USING NETWORK ADAPTER DEVICES AND HIGH SPEED (50 MBIT/S) SERIAL
ABS TRUNKS. THE SERIAL TRUNK SYSTEM PROVIDES CONNECTABILITY BETWEEN
ABS MANY DEVICES AND THE NAD HARDWARE PROVIDES INDEPENDENCE FROM THE
ABS ATTACHED DEVICE CHARACTERISTICS. CONTROL OF THE LCN SYSTEM IS DIS-
ABS TRIBUTED AMONG THE NADS, PROVIDING INDEPENDENCE FROM A SINGLE POINT
ABS OF CONTROL (FAILURE). THE LOGICAL PATH SCHEME PROVIDES ADDITIONAL
ABS INDEPENDENCE FROM THE ATTACHED DEVICE SOFTWARE. CONCURRENT DATA
ABS TRANSFERS ON MULTIPLE LOGICAL PATHS PROVIDE ENHANCED
ABS PERFORMANCE CAPABILITIES.
ABS
ABS UNTER LANK 79 GIBT'S NOCH WEITERE PROSPEKTE UBER LCN
ABS
ABS

NUM 138
TIT LOCALNET - A DIGITAL COMMUNICATIONS NETWORK FOR BROADBAND ...
AUT K.J. BIBA
QUE ---
KEY BROADBAND COAXIAL CABLE-CATV-FDM-PCU-HEAD END-CRF-OUTLET-SYSTEM 20-
KEY TBOX-CSMA/CD-TMUX-SYSTEM 40-VIRTUAL CIRCUIT-BRIDGES-DMA ACCESS PROT
411800 DAT 12.80
DAT 12.80
FIR SYTEK, CALIF., USA
DET BROADBAND
KAP 3.4.3

ABS LOCALNET IS A LOW COST, HIGH PERFORMANCE DATA COMMUNICATIONS
ABS NETWORK. BASED ON A SYNERGISTIC COMBINATION OF BROADBAND ANALOG,
ABS DIGITAL AND PACKET SWITCHING COMMUNICATIONS TECHNOLOGIES, LOCALNET
ABS OFFERS SUBSTANTIAL FUNCTIONAL, PERFORMANCE AND OPERATIONAL
ABS ADVANTAGES OVER CONVENTIONAL LOCAL NETWORKS. UTILIZING INDUSTRY
ABS STANDARD CABLE TV (CATV) DATA DISTRIBUTION FACILITIES, LOCALNET
ABS BUILDS A TRANSPARENT, HIGH PERFORMANCE, COMMUNICATIONS SYSTEM
ABS INCORPORATING DISTRIBUTED NETWORK INTELLIGENCE. THIS APPROACH
ABS PROVIDES FOR THE INTERCONNECTION OF A WIDE RANGE OF USER
ABS EQUIPMENTS, END-TO-END DATA SECURITY, CONFIGURATION FLEXIBILITY,
ABS AND EASE OF INSTALLATION.
ABS UNTER LANK 61: PREISLISTE,LISTE ANDERER BREITBAND HERSTELLER+MODEM
ABS FDM DETAILS-MID SPLIT-LOCALNET EINSATZMOGLICHKEITEN-PROTOKOLL
ABS HIERARCHIE-X.25 GATEWAY- NOTIZEN VON DER VORFUHRUNG IM ZAM AM
ABS 30.4.82 (TELONIC)

NUM 139
TIT INSIDE WANG'S LOCAL NET ARCHITECTURE
AUT M. STAHLMAN
QUE DATA COMMUNICATIONS, 1982, HEFT 1 (JANUAR), S.85-90
KEY FDM-BROADBAND-PACKET FORMAT-CATV-OUTLET-BANDWIDTH-MHZ-KHZ-OIS
KEY INTERCONNECT BAND-FREQUENCY AGILE MODEM-CSMA/CD-CIU-WANG BAND
KEY DATASWITCH-UTILITY BAND-VIDEO
DAT 01.82
FIR WANG LABORATORIES, LOWELL, MASS., USA
DET BROADBAND - FDM - BANDWIDTH
KAP 2.2.4 -3.4.1 -2.3

ABS WANGNET USES A BROADBAND TECHNIQUE BASED ON A DUAL-CABLE,
ABS BRANCHING-TREE TOPOLOGY TO PROVIDE MULTIPLE SERVICES.
ABS
ABS UNTER LANK 51: 1 GLANZPROSPEKT
ABS 1 PRESSEMITTEILUNG (WANGNET LOEST ALLES)
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NUM 140
TIT BUILD A LOCAL NETWORK ON PROVEN SOFTWARE
AUT D. WAY
QUE DATA COMMUNICATIONS, 1981, HEFT 12 (DEZEMBER), S.70-73
KEY BASEBAND-COAX-Z-NET-Z80-PROCESSOR-REQUIREMENTS-DMA-PROTOCOL
KEY INTERFACE
KEY
DAT 12.81
FIR ZILOG, CAMPBELL, CALIF., USA
DET ---
KAP 3.5.1

ABS UNBUNDLED LOCAL-NETWORK SOFTWARE CHANGES THE RULES. HERE IS HOW
ABS TO TAKE ADVANTAGE OF IT.
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NUM 141
TIT INTEGRATED SOFTWARE DESIGN FOR Z-NET, A LOCAL MICROCOMPUTER NETWORK
AUT E. BENHAMOU
QUE PROC OF THE 2ND INTL CONF ON DISTRIBUTED COMPUTING SYS PARIS, S.397
KEY MCZ-2-STAND ALONE Z80A MICROR-SHARING NODE CPU-KERNEL-FILE-FFS-FDM
KEY PROCESS SYNCHRONISATION-MESSAGE QUEUE-PACKET DELIVERY SERVICE
KEY PROTOCOL-RIO/CP-MEMORY MANAGEMENT-CSI-CH-MMGR-I/O SERVER-FLOPPY-FIL
DAT 04.81
FIR ZILOG, CAMPBELL, CALIF., USA
DET ---
KAP 3.5.1

ABS Z-NET I A LOCAL AREA NETWORK OF MICROCOMPUTERS RECENTLY ANNOUNCED
ABS BY ZILOG. IT LOOSELY CONNECTS Z80A BASED PERSONAL COMPUTERS AND
ABS SHARED RESOURCE STATIONS. THE DESIGN OF ITS SYSTEM SOFTWARE IS DIS-
ABS CUSSED IN THIS PAPER. STRONG EMPHASIS WAS PLACED ON LOW COST AND
ABS MODULARITY TO PERMIT EASY EXPANSION FROM A STAND-ALONE MACHINE TO A
ABS COMPLEX INTERNET OF HETEROGENEOUS COMPUTERS. THE OPERATING SYSTEM
ABS IS BASED ON A MULTITASKING KERNEL, INCARNATED ON ALL THE STATIONS.
ABS ITS INTERPROCESS COMMUNICATION FACILITY IS TRANSPARENTLY EXTENDABLE
ABS ACROSS THE NETWORK THROUGH THE USE OF COMMUNICATION PROTOCOLS TO
ABS FACILITATE THE CONSTRUCTION OF DISTRIBUTED APPLICATIONS. NETWORK
ABS CONTROL IS TOTALLY DISTRIBUTED AND SHARED RESOURCE CONTROL IS FULLY
ABS DECENTRALIZED INTO THE RESOURCE NODE ITSELF, IN AN ATTEMPT TO UN-
ABS BURDEN THE INDIVIDUAL USER STATIONS. THE TRADE-OFFS ENCOUNTERED IN
ABS THE COURSE OF ITS DEVELOPMENT ARE DISCUSSED HERE.
ABS

NUM 142
TIT DER START IM ETHERNET
AUT H.J. BULLINGER; K.P. FAEHNRICH; M. KAERCHER
QUE BUEROTECHNIK, 1981, HEFT 11, S.1083-1094
KEY PARC-XEROX-8000-STAR-ETHERNET-PREIS-SIEMENS- -EFTP-ALTO-FILESERVER
KEY PRINT/KOMM SERVER-GRAFIK-HISTOGRAM-WORD PROCESSOR-DESKTOP COMPUTER
KEY MAUSE-ICON-LASERPRINTER-MAILING SYSTEM-TERMINAL EMULATION-MESA-
DAT 11.81
FIR ---
DET STAR SYSTEM
KAP 3.2.1 - 2.3

ABS IN DEN USA WURDE VOR NICHT ALLZU LANGER ZEIT EIN NEUES KONZEPT
ABS FUER INHOUSE-NETZE VORGESTELLT, DEM EINE INTERESSANTE PHILOSOPHIE
ABS ZUGRUNDE LIEGT UND DAS ERSTAUNLICHE LEISTUNGEN BIETET, ES HANDELT
ABS SICH DABEI UM EIN PASSIVES DATENNETZ HOHER UEBERTRAGUNGSLEISTUNG,
ABS DAS OHNE'NETZINTELLIGENZ' AUSKOMMT. DARAUS RESULTIERT GERINGE
ABS STOERANFAELLIGKEIT UND HOHE FLEXIBILITAET BEI DER KONFIGURATION.
ABS BEKANNT WURDE DAS PRODUKT UNTER DEM NAMEN ETHERNET (XEROX-8000-
ABS NETWORK-SYSTEM). DER AUFSATZ GIBT EINEN UEBERBLICK UEBER DIESES
ABS PRODUKT.
ABS MODERNE INHOUSE-NETZKONZEPTION-NETZE REVIEW-ETHERNET REVIEW-
ABS TECHNISCHE DETAILS-LEISTUNGSMESSUNGEN ETHERNET-PERIPHERIEN-
ABS DER "STAR":ZIELSETZUNG-HARDWARE-BENUTZERSCHNITSTELLE-SOFTWARE-
ABS ETHERNET UND STAR AM MARKT: PREISE-ANDERE FIRMEN
ABS
ABS

NUM 143
TIT THE LEADING EDGE
AUT D. BOGGS
QUE DATA COMMUNICATIONS, 1981, HEFT 12 (DEZEMBER), S.59-60
KEY
KEY -----
KEY
DAT 12.81
FIR XEROX, PALO ALTO, USA
DET ---
KAP 3.2.1

KEY FRAME-OSI-FILE ACCESS MAN-REMOTE FILE-DISTRIBUTED FILES-X.25-RING
ABS A PIONEERING NEW DEVELOPMENT THAT MAKES IT POSSIBLE TO LINK
ABS DIFFERENT OFFICE MACHINES INTO A SINGLE NETWORK THAT'S RELIABLE,
ABS FLEXIBLE AND EASILY EXPANDABLE.
ABS THE FOLLOWING ARE SOME NOTES EXPLAINING THE TECHNOLOGICAL
ABS UNDERPINNINGS OF THIS DEVELOPMENT.
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NUM 144
TIT MODELLING OF LOCAL COMPUTER NETWORKS
AUT O. SPANIOL
QUE COMPUTER NETWORKS, 1979, HEFT 3, S.315-326
KEY LOCAL NETWORKS-MATHEMATICAL MODELS-ACCESS METHOD-TDMA-RESERVATION-
KEY PERFORMANCE ANALYSIS-ETHERNET-CSMA-BROADCAST NETWORK-THROUGHPUT-
KEY RETRANSMISSION CONTROL-PRIORITY QUEUEING-SLOTTED ETHERNET-
DAT 02.79
FIR UNIVERSITAET FRANKFURT
DET SLOTTED ETHERNET
KAP 2.2.6

ABS THIS PAER PRESENTS A NEW CONCEPT FOR LOCAL COMPUTER NETWORKS. MAIN
ABS FEATURES OF THE NEW MODEL ARE: AUTOMATIC RESERVATIONS FOR COLLIDING
ABS PACKETS (THUS AVOIDING REPEATED COLLISIONS); NEAR OPTIMUM
ABS THROUGHPUT; FINITE MAXIMUM WAITING TIMES EVEN FOR PRIORITY
ABS SCHEDULING POLICIES. THE PERFORMANCE OF THE SYSTEM IS ANALYZED BY
ABS MEANS OF A SEMI-MARKOV PROCESS. NUMERICAL RESULTS HAVE BEEN
ABS OBTAINED FOR THE MOST INTERESTING PARAMETERS. A COMPARISON WITH
ABS RESERVATION TECHNIQUES WHICH HAVE BEEN PROPOSED FOR OTHER COMPUTER
ABS NETWORKS IS GIVEN IN THE FINAL SECTION OF THE PAPER.
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NUM 145
TIT IMPLEMENTING ETHERNET FROM SOUP TO NUTS(UNET)
AUT J. MASON; G. SHAW
QUE DATA COMMUNICATIONS, 1981, HEFT 12 (DEZEMBER), S.74-80
KEY ETHERNET-DEC-VAX-PDP-LSI-11-UNIX-OSI-UNET-TRANSCEIVER-PACKETS
KEY BUFFER-DATA LINK/NETWORK/TRANSPORT LAYER-TCP-IP-INTERFACE-
KEY VIRTUAL CIRCUIT-UFTP-UMTP-FILE TRANSFER-MAIL-MAILBOX-DRIVER-
DAT 12.81 HYPERCHANNELL-IBM-3270-
FIR 3COM CORP., CALIF., USA
DET 3COM ETHER CONTROLLER
KAP 3.2.2

ABS OFF-THE-SHELF HARDWARE AND SOFTWARE FOR CONSTRUCTING AN
ABS ETHERNET LOCAL NETWORK IS NOW AVAILABLE FROM ONE VENDOR.
ABS
ABS
ABS LANK-110: DETAILIERTE PRODUKTBESCHREIBUNG+PREISLISTE DER
ABS VERTRIEBSFIRMA TEWIDATA (USA PREISE AUCH)
ABS KONTAKTPERSON+BESTELLUNG
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NUM 146
TIT NET/ONE'S ANSWER TO PACKET AND CIRCUIT SWITCHING
AUT J.M. DAVIDSON
QUE DATA COMMUNICATIONS, 1981, HEFT 12 (DEZEMBER), S.84-96
KEY ETHERNET-NIU-DR11-W INTERFACE-VIRTUAL CIRCUIT-COMMAND-RS-232
KEY NAME-DATEGRAM SERVICE-SDP-UNIX-CSMA/CD-PROTOCOL-TCP-VCP-X-ON/X-OFF
KEY INTERNET HEADER-PORT-
DAT 12.81
FIR UNGERMANN-BASS, CALIF., USA
DET NET/ONE
KAP 3.2.3

ABS UNGERMANN-BASS'S APPROACH TO LOCAL NETWORKING IS FLEXIBILITY.
ABS ITS NET/ONE OFFERS USERS BOTH VIRTUAL-CIRCUIT AND DATAGRAM
ABS SCHEMES.
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ABS LANK-78: NACHRICHT: UNGERMANN-BASS ADDS BROADBAND (CP/M-NCF)
ABS PROSPEKT VON KONTRON: NET/ONE BESCHR.- INSTALLATIONEN
ABS PSI FI 80 - PERSONALCOMPUTER-BETRIEBSYS-OPERATING SYS
ABS PERIPHERIEN
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NUM 147
TIT LOCAL NETWORK ARCHITECTURE PROPOSED FOR WORK STATIONS(ILNA)
AUT R. RYAN; G. MARSHALL; R. BEACH; S. KERMAN
QUE ELECTRONICS, 1981, AUGUST 25, S.120-124
KEY ILNA-ETHERNET-INTERFACE-ALGORITHM-PROTOCOL-MESSAGE-SOCKET-PORT-HOST
KEY PROCESS-DATA-LINKLAYER-NODE-TO-NODE
KEY =ISBC 550=MULTIBUS=MIP=IRMX=SERDES BOARD=
DAT 08.81
FIR INTEL CORP., CALIF., USA
DET LAN ARCHITECTURE
KAP 2.2.7

ABS GENERAL-PURPOSE STANDARD COMPATIBLE WITH ETHERNET WILL SERVE
ABS MANY APPLICATIONS AT A WIDE RANGE OF PERFORMANCE LEVELS.
ABS
ABS DATA LINK: NODE-TO-NODE PACKET DELIVERY SERVICE
ABS COLLISION INSURANCE - ADDRESSING SCHEME -
ABS TRANSPORT LAYER (SOFTWARE): VIRTUAL CIRCUIT - SOCKET-TO-SOCKET
ABS DATA PATH - ERROR CONTROLLED, FULL DUPLEX, FLOW CONTROLLE
ABS FRAGMENTATION+REASSEMBLY - ACKNOWLEDGE - WINDOW WIDE OPEN
ABS SESSION LAYER: BINDING FUNCTION - MAPPING PROCESS/SOCKET
ABS UPDATE: DISTRIBUTING MAPPING INFO
ABS NETWORK MANAGEMENT: OPERATION, MAINTENANCE, PLANNING
ABS BOOTSTRAP-ERROR COUNTERS-REMOTE EXAMINATION AND
ABS INTERROGATION - MAINTAINING STATISTICAL INFO
ABS LANK69: PRODUKTBESCHREIBUNG DES ISBC 550 INTELLIGENTEN ETHERNET
ABS CONTROLLERS+PREIS=MICROPROC=MULTIBUS INTERF/PROTOKOLL=MULTITASK OPS

NUM 148
TIT NETWORK MINIMIZES OVERHEAD OF SMALL COMPUTERS(OMNINET)
AUT M. HAHN; P. BELANGER
QUE ELECTRONICS, 1981, AUGUST 25, S.125-128
KEY OMNINET-TWISTED PAIR-TRANSPORTER-RS 422-MC 6854 ADLC CHIP-MC6801UP
KEY NO CARRIER-CARRIER SENSING-TEXAS SN75174/5 LINE DRIVER CHIP-SERVER
KEY POSITIVE ACK PROTOCOL-MICRO VIRTUAL CIRCUIT-GATEWAY-ETHER-SNA-
DAT 08.81
FIR CORVUS SYSTEMS, CALIF., USA
DET OMNINET
KAP 3.5.4

ABS A TWO-WIRE CABLE AND A MICROPROCESSOR-BASED INTERFACE BOARD
ABS DIRECT ALL THE TRAFFIC IN A LOW-COST 1 MB/S LOCAL NETWORK.
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NUM 149
TIT A LOW-SPEED LOCAL NET FOR UNDER $100 PER STATION(INFINET)
AUT R. BOSEN
QUE DATA COMMUNICATIONS, 1981, HEFT 12 (DEZEMBER), S.81-83
KEY CSMA/CD-SPEED-# OF STATIONS-PACKET-MULTISPEED-ACK-LEVEL 1/2/3-5KM-
KEY TWISTED PAIR-RS 422-UART-CP/M-UTILITY-NATIONAL SEMICONDUCTOR 8250
KEY
DAT 12.81
FIR ZEDA COMPUTERS, UTAH, USA
DET WENIG
KAP 3.5.2

ABS IF 25 KB/S IS FAST ENOUGH FOR YOUR APPLICATIONS, THIS
ABS LOCAL NETWORK - IMPLEMENTED AROUND SMALL BUSINESS COMPUTERS -
ABS MAY PROVIDE A SOLUTION.
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NUM 150
TIT RING NETS: PASSING THE TOKEN IN LOCAL NETWORK CIRCLES(PRIMENET)
AUT R.E. STERRY
QUE DATA COMMUNICATIONS, 1981, HEFT 12 (DEZEMBER), S.97-100
KEY JUNCTION BOX-ELECTRONIC RELAY-BYPASS-NODE CONTROLLER-NODE-TOKEN-
KEY
KEY VIRTUAL CIRCUIT-PROTOCOL HIERARCHY-INTERPROGR COMM FAC-PACKET STRUC
DAT 12.81
FIR PRIME COMPUTER, MASS., USA
DET PRIMENET
KAP 3.5.5 RING - 2.3

ABS SEQUENTIAL TRANSMISSION HAS ADVANTAGES OVER CONTENTION FOR
ABS OFFICE-OF-THE-FUTURE APPLICATIONS - AMONG THEM, ADAPTABILITY
ABS TO GROWING DATA TRAFFIC.
ABS
ABS PRIMENET SERIES OF RJE EMULATION PACKAGES:CDC,IBM,UNIVAC,HONEYWELL
ABS INTERACTIVE TERMINAL SUPPORT FACILITY
ABS INTERPROGRAMM COMMUNICATION FACILITY
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NUM 151
TIT THE MICROCOMPUTER CONNECTION TO LOCAL NETWORKS(CLUSTER/ONE MODEL A
AUT J. MALONE
QUE DATA COMMUNICATIONS, 1981, HEFT 12 (DEZEMBER), S.101-104
KEY SYSTEM APPROACH-INTEGRATED SOFTWARE-FOR BUSINESS APPLICATIONS-CP/M
KEY APPLE II/III-APPLE DOS/PASCAL-16-WIRE-CABLE-REPEATER-VIRTUAL I/O
KEY CSMA/CD-FILE-SERVER APPLE-BOOTSTRAP-VIRTUAL DISK-PRINT SERVER-
DAT 12.81
FIR NESTAR SYSTEMS, CALIF., USA
DET CLUSTER/ONE
KAP 3.5.3 - 2.3

ABS PERSONAL COMPUTERS - AS TYPIFIED BY THE APPLE- TOGETHER WITH
ABS INTEGRATED SOFTWARE AND A HIGH LEVEL LANGUAGE ARE THE KEYSTONE OF T
ABS THIS 240-KBIT/S LOCAL NETWORK
ABS
ABS AUTO STARTUP-DOWNLOADING-VISICALC-DB MASTER-PASCAL-ELECTRONIC MAIL-
ABS MAIL FILE-MULTINETWORKING-FILE TRANSFER SERVER FTS-GATEWAY SERVER
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NUM 152
TIT JET POPULSION LOCAL AREA NETWORK (JPLAN)
AUT A.K. AGRAWAL; V.V. VADAKAN
QUE PROC OF THE 2ND INTL CONF ON DISTRIBUTED COMPUTING SYS PARIS
KEY VOYAGER-NETWORK BUS ADAPTER NBA-15 REQUIREMENTS-BLOCK-PACKET-FRAME
KEY LOGICAL CHANNEL-PROGRAMMABLE LOGIC ARRAY PLA-BIT SLICED SEQUENCER-
KEY MANCHESTER-CSMA/CD-2800-SIGNETICS 2652 HDLC CHIP-FIFO-CAM-NASA
DAT 04.81
FIR JET POPULSION LABORATORY, CALIF., USA
DET JPLAN - MANCHESTER- NRZ
KAP 3.3.3

ABS THIS PAPER DESCRIBES A LOCAL COMPUTER NETWORK TO BE CALLED JPLAN
ABS WHICH IS BEING DEVELOPED AT THE JET POPULSION LABORATORY TO
ABS PROVIDE INTERCOMMUNICATION BETWEEN A NUMBER OF MINICOMPUTERS AND
ABS MICROCOMPUTERS IN A GROUND TELEMETRY DATA PROCESSING SYSTEM. AN
ABS OVERVIEW IS PRESENTED HEREIN DESCRIBING THE ARCHITECTURE AND
ABS OPERATION OF THE DUAL Z8000 MICROPROCESSOR-BASED NODE ADAPTERS
ABS WHICH WOULD ULTIMATELY ALLOW A WIDE VARIETY OF DEVICES RANGING
ABS FROM MINICOMPUTERS, MICROCOMPUTERS, COMPUTER PHERIPHERALS AND
ABS TERMINAL CONCENTRATORS TO BE FULLY INTERCONNECTED VIA A COMMON
ABS COAXIAL CABLE NETWORK BUS. MICROPROGRAMMABLE BIT-SLICED SEQUENCERS
ABS ARE USED FOR PROVIDING FLEXIBILITY IN THE GENERATION OF CONTROL
ABS SIGNALS THROUGHOUT THE HARDWARE SUBSYSTEMS IN THE PROTOTYPE.
ABS
ABS CONTENT ADDRESSABLA MEMORY CAM-ASSOCIATIVE MEMORY-VIRTUAL CIRCUIT
ABS DEC PDP-11 - MODCOMP IV - RECEIVE MODE - TRANSMIT MODE-

NUM 153
TIT DIGITALES KOMMUNIKATIONSSYSTEM DIKOS
AUT A. REIM; K.D. SCHENKEL
QUE NTZ, 1981, HEFT 10, S.658-663
KEY TDMA-ZBS-DBS-DATENAUSTAUSCH-SPRECHVERBINDUNG-LINIEN/VERZWEIGUNGSNET
KEY MASTE CLOCK STATION-ZEITMULTIPLEX-SENDE/EMPFANGSLEITUNG-ZEITSCHLITZ
KEY LICHTLEITER-VERBINDUNGSAUFBAU/AB-DIENSTEKENNUNG-SYNC REFLEX-RAHMEN
DAT 10.81
FIR AEG TELEFUNKEN
DET TDM - ZEITMULTIPLEXRAHMEN-FORMULIERUNG
KAP 2.3

ABS EIN KOMMUNIKATIONSSYSTEM, IN DEM SOWOHL DATEN ALS AUCH SPRACHINFOR-
ABS MATION UEBERTRAGEN WERDEN SOLLEN, MUSS FUER EINEN OPTIMALEN NETZ-
ABS BETRIEB WICHTIGE VORAUSSETZUNGEN ERFUELLEN: KURZE VERBINDUNGSAUF-
ABS BAUZEIT, ANPASSUNG DER BEREITGESTELLTEN UEBERTRAGUNGSKAPAZITAET AN
ABS DIE ZU UEBERTRAGENDE INFORMATIONSMENGE, BALANCED-MODE-BETRIEB
ABS D.H. ALLE STATIONEN SIND BEZUEGLICH DES VERBINDUNGSAUFBAUS GLEICH-
ABS BERECHTIGT) UND JE NACH NETZERFORDERNIS, ANSCHLUSS AN BUSLEITUNG
ABS ODER STERNFOERMIGER ANSCHLUSS ALLER STATIONEN. DIE BISHER EINGE-
ABS SETZTEN KOMMUNIKATIONSSYSTEME BAUEN IN DER REGEL JEDOCH ENTWEDER
ABS AUF DEM HERKOEMMLICHEN FERNSPRECHSYSTEM AUF ODER LEHNEN SICH AN
ABS DIE IM RECHNERVERBUND UEBLICHEN DATENBUSSYSTEME AN. UM DIE DAMIT
ABS VERBUNDENEN NACHTEILE ZU UMGEHEN, WURDE DAS DIGITALE KOMMUNIKA-
ABS TIONSSYSTEM DIKOS ENTWICKELT.
ABS DIENSTE: LEERER ZEITKANAL-FERNSPRECHVERB-KONFERENZVERB-DATENVERB
ABS   BREITBANDDATENVERB-TEILNEHMER BESETZT-DIENST NICHT VORHAN

NUM 154
TIT OPTISCHE DATENBUSSE FUER MESS- UND REGELAUFGABEN
AUT H.H. WITTE
QUE ELEKTRONIK, 1981, HEFT 4, S.63-70
KEY OPTISCHER T-BUS/STERN BUS-VIERTOR-KOPPLER-T-KOPPLER-STERNKOPPLER-
KEY STRAHLTEILER PRINZIP-STUFENINDEX/GRADIENTENPROFIL-FASER-TOTALREFLEX
KEY STRECKENDAMPFUNG-PEGELDYNAMIK-STERNBUS-LUMINESZENZ/LASERDIODE
DAT 01.81
FIR SIEMENS
DET LICHTLEITERTECHNIK
KAP 2.2.4

ABS NACHDEM SICH DIE LICHTLEITERTECHNIK FUER NACHRICHTEN- UND DATEN-
ABS UEBERTRAGUNG ALS BESTENS GEEIGNET ERWIESEN HAT, STEHT NUN AUCH
ABS IHREM EINZUG IN DIE MESS- UND REGELTECHNIK NICHTS MEHR IM WEGE.
ABS GERADE HIER, WO HAEUFIG STARKE ELEKTROMAGNETISCHE STOERFELDER AUF-
ABS TRETEN, ZEIGT SICH IHRE UEBERLEGENHEIT GEGENUEBER DER HERKOEMM-
ABS LICHEN KABELTECHNIK. DIE HOHE BANDBREITE BIETET DABEI DIE MOEG-
ABS LICHKEIT, DIE DATEN BITSERIELL UND NICHT, WIE IM ELEKTRISCHEN FALL,
ABS BITPARALLEL ZU UEBERTRAGEN. WIE EIN DERARTIGER OPTISCHER BUS IM
ABS EINZELNEN AUSSIEHT, IST DER INHALT DES ARTIKELS.
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NUM 155
TIT A LOCAL DISTR MICROCOMP NETW BASED ON OPTICAL BUS ... (SIELOCNET)
AUT P. BIRZELE; H. THINSCHMIDT
QUE PROC OF THE 2ND INTL CONF ON DISTRIBUTED COMPUTING SYS PARIS
KEY STAR-COUPLER-RECEIVING/SENDING FIBER-LED TRANSMITTER-PIN-DIODE-RECE
KEY BROADCAST SYSTEM-UNSLOTTED ACCESS TECHNIQUE-LEVEL 1/2/3-X.27=RS 422
KEY COMM SECTION-X.25-BUS CONTROLLER-DMA-FIFO-FIBER OPTIC-SEND/REC MESS
DAT 04.81
FIR SIEMENS, MUENCHEN
DET ---
KAP 3.3.4 - 2.3

ABS THIS PAPER DESCRIBES THE ARCHITECTURAL CONCEPT OF A RESEARCH
ABS ORIENTED SIEMENS LOCAL NETWORK (SIELOCNET). THE SYSTEM IS IN THE
ABS DEVELOPING PHASE IN THE RESEARCH LABS. IN A FIRST VERSION IT WILL
ABS CONNECT 16 PROCESSORS TO AN OPTICAL BUS OVER 500 M. THE TRANS-
ABS MISSION RATE OF THE COMMUNICATION SYSTEM IS 16 MBIT/S. SOME
ABS CHARACTERISTICS, SUCH AS COMMUNICATION CONTROL, COLLISION
ABS DETECTION AND THE PROTOCOLS OF THE LOCAL NET ARE OUTLINED.
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NUM 156
TIT ARCHITEKTUR UND BETRIEBSSYSTEMCHARAKTERISTIKA VERTEILTER SYSTEME
AUT F. SCHMIDTKE
QUE SIEMENS MITTEILUNG
KEY PROTOKOLL-ISO MODELL-FUNKTIONSVERB-DATENVERB-LASTVERB-KOMMUNIKVERB-
KEY LICHTLEITER-16 MBIT-INTEL MULTIBUS-KOMMTEIL KT-VERARBTEIL VT-KBS-
KEY KNOTENBETRSYS-KONFIG/AUFTRAG/LOK PROZESS VERWALTUNG-INTERPROZESSKOM
DAT 01.82
FIR SIEMENS, MUENCHEN
DET ---
KAP 3.3.4 -2.3

ABS VERTEILTE SYSTEME BIETEN GEGENUEBER HERKOEMMLICHEN ZENTRALRECHNERN
ABS EINE REIHE VON VORTEILEN, WIE DIE FAEHIGKEIT ZUR PARALLELARBEIT,
ABS FEHLERTOLERANZ, ERWEITERBARE SYSTEMARCHITEKTUREN UND KLAR STRUKTU-
ABS RIERTE SOFTWARESYSTEME. DEMGEGENUEBER STEHT EIN ERHOEHTER AUFWAND
ABS AN SYSTEMSOFTWARE ZUR INITIIERUNG UND KOORDINIERUNG DEZENTRALER
ABS AKTIVITAETEN, VOR ALLEM FUER KOMMUNIKATION UND AUFTRAGSVERWALTUNG.
ABS DIESE PROBLEMATIK WIRD ANHAND DER BESCHREIBUNG VON ARCHITEKTUR UND
ABS BETRIEBSSYSTEM EINES LOKALEN NETZES VERDEUTLICHT, DAS MOMENTAN ENT-
ABS WICKELT WIRD. DAS MICROCOMPUTERNETZ BESTEHT AUS BENUTZERSTATIONEN,
ABS FUNKTIONSRECHNERN UND BENUTZERPROGRAMMIERTEN LASTRECHNERN. ES
ABS LAESST SICH IN FORM EINES BAUKASTENSYSTEMS IN BELIEBIGER WEISE ZU-
ABS SAMMENSTELLEN UND AN DIE GEGEBENHEITEN SPEZIELLER EINSATZFAELLE AN-
ABS PASSEN. DIE KOMMUNIKATION DER RECHNERKNOTEN WIRD DURCH INTELLIGENTE
ABS NETZWERKCONTROLLER EINES OPTISCHEN BUSSYSTEMS WEITGEHEND AUTONOM
ABS UND PARALLEL ZU DEN VERARBEITUNGSFUNKTIONEN ABGEWICKELT.

NUM 157
TIT EINSATZ EINES LICHTWELLENLEITER-BUSSYSTEMS IN EINER VERTEILTEN ...
AUT A. SAUER; H.H. WITTE
QUE SIEMENS FORSCHUNGS- UND ENTWICKLUNGSBERICHT, 1980, NR.1, S.32-37
KEY STERNKOPPLER-OPTISCHE BAUSTEINE-DIALOGRECHNER-FUNKTIONSRECHNER-BLOC
KEY MULTIMODEFASER-LED-PIN-DIODE-REFLEKTOR-LEISTUNG-VERLUST-DAMPFUNG-
KEY FASERSTIRNFLACHE-E/A ZUM LICHTLEITERBUS-DMA-STRECKENLANGE 300M
DAT 11.79
FIR SIEMENS, MUENCHEN
DET LICHTLEITERTECHNIK
KAP 2.2.4

ABS DIE ANFORDERUNGEN AN EIN OPTISCHES BUSSYSTEM UND AN EINE
ABS MEHRRECHNERSTRUKTUR, DIE SICH AUF GRUND DER DEZENTRALISIERUNG ER-
ABS GEBEN, WERDEN IM FOLGENDEN BESCHRIEBEN UND KONKRETISIERT. ES
ABS LAESST SICH LEICHT ABSCHAETZEN, DASS BEI EINER TEILNEHMERZAHL VON
ABS ETWA 10 AN MIT HEUTE VERFUEGBAREN OPTISCHEN BAUSTEINEN WEGEN DER
ABS LEISTUNGSANFORDERUNGEN REINE T-BUS-STRUKTUREN NICHT IN FRAGE .
ABS KOMMEN. NUR STERNKONFIGURATIONEN, BESTENFALLS HYBRID MIT T-KONFI-
ABS GURATIONEN VERKNUEPFT, GENUEGEN DANN NOCH DEN LEISTUNGSANFORDE-
ABS RUNGEN DER BUSSTRUKTUREN. BEI DEM AUFBAU DES OPTISCHEN BUSSES IN
ABS EINER VERTEILTEN MULTI-MICROCOMPUTERSTRUKTUR WERDEN AUS DIESEN
ABS GRUENDEN IN DER VORLIEGENDEN ARBEIT NUR STERNKOPPLER-ANORDNUNGEN
ABS UNTERSUCHT.
ABS
ABS + FIBER OPTICS INDUSTRY/TECHNOLOGY/MARKET/COMPETITION OVERVIEW (81)
ABS

NUM 158
TIT THE CAMBRIDGE MODEL DISTRIBUTED SYSTEM(CMDS)
AUT M.V. WILKES; R.M. NEEDHAM
QUE ACM OPERATING SYSTEMS REVIEW, VOL. 14, NR. 1, S.21-29
KEY COMPUTER BANK-ACCESS BOX-TERMINAL CONCENTRATOR-MINIPACKET-RINGPACKE
KEY RESOURCE MANAGER-BYTE STREAM PROTOCOL-NAME/FILE/PRINT/TIME SERVER
KEY SOFTWARE-BOOT/EDIT SERVER-PROTOCOL-INTELL TERMINAL-
DAT 01.80
FIR UNIVERSITY OF CAMBRIDGE, ENGLAND
DET CAMBRIDGE RING
KAP 3.5.5 - RING

ABS THIS PAPER CONTAINS A DESCRIPTION OF THE CAMBRIDGE MODEL DISTRI-
ABS BUTED SYSTEM (CMDS). CMDS SETS OUT TO PROVIDE, BY MEANS OF A
ABS NUMBER OF INTERCONNECTED MINI- AND MICROCOMPUTERS, FACILITIES THAT
ABS ARE SIMILAR TO THOSE PROVIDED BY A TIME-SHARING SYSTEM. A USER LOGS
ABS IN IN THE USUAL MANNER BUT, INSTEAD OF BEING GIVEN A SHARE OF THE
ABS CAPACITY OF A CENTRAL MAINFRAME, HE IS ALLOCATED ONE OF THE COMPU-
ABS TERS ON THE SYSTEM. DURING THE REMAINDER OF HIS SESSION HE HAS THE
ABS EXCLUSIVE USE OF THAT COMPUTER JUST AS THOUGH IT WERE HIS PERSONAL
ABS MINICOMPUTER. IN SUITABLE CIRCUMSTANCES HE MAY BE ALLOCATED THE USE
ABS OF MORE THAN ONE COMPUTER. IMPLEMENTATION OF CMDS IS STILL IN AN
ABS EARLY STAGE AND THE SYSTEM MAY ULTIMATELY DIFFER FROM WHAT IS
ABS DESCRIBED HERE. THE PAPER CONTAINS A DISCUSSION OF VARIOUS CONTRO-
ABS VERSIAL ISSUES THAT ARE BEING ENCOUNTERED DURING THE DESIGN AND
ABS GIVES REASONS FOR THE DECISIONS THAT ARE BEING TAKEN.
ABS

NUM 159
TIT THE FIRST ALL-IN-ONE LOCAL NETWORK(UBITS)
AUT D.S. CASTUEIL; D.L. GIOVACHINO; D.L. LENGYEL
QUE DATA COMMUNICATIONS, 1981, HEFT 8 (AUGUST), S.93-102
KEY BROADBAND-MICROWAWE LINK-GLOBAL INTERFACE UNIT GIU-NETW MANAGEMENT
KEY UNIT NMU-DATA/VOICE/VIDEO PIM-MULTIPLE TWISTED PAIR-CSMA-PAD-X.3
KEY PROGRAMMABLE INTERF MOD-X.28-OSI-PROTOCOL-PCM/TDM-X.25-SDLC-DOD
DAT 08.81
FIR AMECOM DIVISION, LITTON INDUSTRIES, USA
DET UBITS
KAP 2.3- 3.4.2

ABS THIS ALL-DIGITAL LOCAL NETWORK, WITH VERY HIGH SPEEDS AND A
ABS SIMPLE PROTOCOL, INTEGRATES DATA, VOICE, AND VIDEO, SUPPORTS
ABS ANY VENDOR'S EQUIPMENT, AND PROMISES ADDITIONAL PROTOCOL/
ABS SPEED-CONVERSION CAPABILITIES.
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NUM 160
TIT ETHERNET EIN SUPERFLOP
AUT ---
QUE DIE COMPUTER ZEITUNG
KEY ETHERNET,NIXDORF,XEROX,LIZENZ,IBM,WANG-NET,XTEN
KEY
KEY
DAT 21.4.82
FIR ---
DET ---
KAP ---

ABS ETHERNET VIEL ZU FRUEH
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NUM 161
TIT ETHERNET AUCH FUR INHOUSE BEREICH
AUT ---
QUE DIE COMPUTER ZEITUNG
KEY ETHERNET,NIXDORF,SPARTACUS INC,IBM,VM-ESX,UNIX
KEY
KEY
DAT 21.4.82
FIR ---
DET ---
KAP ---

ABS FUR DIE HORIZONTALE INTEGRATION UNTERSCHIEDLICHER RECHNER UND
ABS ANWENDUNGEN DER IBM-WELT WILL NIXDORF EIN VM/370 VERSION
ABS NUTZEN. IM GEGENSATZ ZU IBM, DIE DIE VERTIKALE INTEGRATION
ABS BETREIBT, WOBEI VOR ALLEM AUFSTIEG VON DOS NACH OS/MVS ERMOGLICHT
ABS WIRD; SIEHT NIXDORF IN VM-ESX DIE CHANCE , DATENVERARBEITUNG OHNE
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NUM 162
TIT A UNIX BASED LOCAL COMPUTER NETWORK WITH LOAD BALANCING
AUT HWANG,CROFT,GOBLE,WAH,BRIGGS,SIMMONS,COATES
QUE COMPUTER APRIL 82
KEY DIAL UP/ HARDWIRED UNIX-DDCMP-CON-NS-RXE-LOAD BALANCING STRATEG.
KEY ECN-DMC-11-VAX/780-DEC PDP 11/70-11/40,UUCP-PERFORMANCE -
KEY BERKELEY NETWORK, RYDE NETWORK AT BELL LABS
DAT 4.82.
FIR PORDUE UNIVERSITY
DET DMC11 INTERFACE VON DEC
KAP 3.3

ABS 1.
ABS UNIX NETWORK CAN BE IMPLEMENTED WITH COMMERCIAL DEC PROCESSORS AND
ABS AVAILABLE INTERFACE AND COMMUNICATION LINKS. NO SPECIAL HARDWARE
ABS NEED TO BE DESIGNED. THIS OFF-THE-SHELF APPROACH SAVES SIGNIFICANT
ABS DEVELOPMENT OVERHEAD.
ABS 2.
ABS HIGH LEVEL APPLICATION PROGRAMS: CON -CONNECT VIRTUAL TERMINAL,
ABS NS - NETWORK SHELL, RXE - REMOTE EXECUTION ENVIRONMENT (LOAD
ABS BALANCE) (NS= REMOTE PROCESS EXECUTION)
ABS 3.
ABS ALL HOSTS WILL BE REPLACED BY VAX-S, DISKS WILL BE MULTIWAY ACCESSA
ABS BLE, INTEGRATION OF ETHERNET HARDWARE
ABS HIGH BANDWITH OF END-TO-END INTERPROCESS COMMUNICATION IN ECN
ABS (500 KBAUD FOR ONE HOP) AND RAPID CONNECTION ESTABLISH TECHNIQUES
ABS ALLOW LOAD SHARING ALGORITHMS BASED ON FILE TRANSFER.

NUM 163
TIT 3COM'S ETHERNET PRODUKTE
AUT ---
QUE 3COM'S BRIEF
KEY ETHERNET-TRANSCEIVER-CONTROLLER-CABLE-STARTER PACKAGE-Q-BUS-UNIBUS
KEY RSX-RT-11-VMS-VAX-DRIVER-MULTIBUS-UNIX-UNET-ONYX-LSI-11-IP-TCP
KEY ELECTRONIC MAIL-DATAGRAM SERVICE-AUTOMATIC ROUTE THROUGH
DAT 3.82.
FIR 3COM CORPORATION (COMPUTER COMMUNICATION COMPATIBILITY)
DET DH-11,DL-11,DZ-11,DA-11B
KAP 3.2.2

ABS PRODUKTBESCHREIBUNG-ETHERNET TRANSCEIVER $495-TRANSCEIVER CABLE$165
ABS ETHERNET CABLE $20-Q-BUS CONTROLLER $1925+DIAGNOSTIC+RT/RSX DRIVER+
ABS REF MAN+Q-BUS STARTER PACKAGE $5280-UNIBUS CONTROLLER $2640+DIAG
ABS +RT/RSX/VMS DRIVER+REF MAN+UNIBUS STARTER PACKAGE $6710-
ABS MULTIBUS CONTROLLER $1375+REF MAN+MULTIBUS STARTER PACKAGE $4180-
ABS
ABS UNET NETWORKING SOFTWARE FOR UNIX
ABS REMOTE FILE TRANSFER (UFTP) - SINGLE/MULTI FILE COMMANDS:
ABS GET,PUT,DELETE,RENAME/MGET,MPUT MDELETE
ABS VIRTUAL TERMINAL (UVTP)
ABS PROCESS TO PROCESS COMMUNICATION (VIRTUAL CIRCUIT) GETC,PUTC,FCLOSE
ABS SERVERS- ELECTRONIC MAIL TRANSFER (TO,FROM,DATE,SUBJECT,CC,BODY,
ABS (UMTP) - DATAGRAM SERVICE = ACCES TO NETWORK LAYER
ABS AUTOMATIC ROUTE THROUGH WHER TOPOLOGY DOES'NT ALLOW ALL NODES TO BE
ABS DIRECTLY CONNECTED-ISO MODEL MATCHING-NEEDS 256K,USE 70K,KERNEL15K

NUM 164
TIT THEMATIK FUR LOCAL AREA NETWORKS
AUT ---
QUE CURSES ABOUT THE TOPIC
KEY
KEY
KEY
DAT 4.82.
FIR AMR INTERNATIONAL- TECHNOLOGY TRANSFER INSTITUTE
DET ---
KAP 2

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NUM 165
TIT REALITY AND THE PROPOSED OSI STANDARD
AUT BERT MOLDOW
QUE DATA COMMUNICATION
KEY X.25-DTE-DCE-OSI-ISO-PROTOCOL-HDLC-END-TO-END-VIRTUAL CIRCUIT
KEY
KEY
DAT 6.81.
FIR IBM SYSTEMS RESEARCH INSTITUTE
DET X.25-ISO/OSI
KAP 2.2.7.2-6

ABS BY EXEMINING SEVERAL NETWORK CONFIGURATIONS, THE AUTHOR POINTS OUT
ABS SOME WEAKNESSES IN THE CURRENT OSI ARCHITECTURE AND SUGGESTS
ABS SOME INTERESTING WAYS TO ENHANCE IT.
ABS
ABS "THERE IS A COMMON MISTAKEN BELIEF THAT X.25 REPRESENTS THE LOWEST
ABS THREE LAYERS SPECIFIED IN THE OSI MODEL..."
ABS
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NUM 166
TIT MAKING A CASE FOR TOKEN PASSING IN LOCAL NETWORKS
AUT C. KENNETH MILLER - DAVID M. THOMSON
QUE DATA COMMUNICATIONS
KEY TOKEN PASSING-CSMA/CD-LOGICAL RING-IEEE 802-PROPAGATION TIME
KEY INITIALIZATION-DEMAND WINDOW-COLLISION DETECT-TAP-MEDIUM-TOPOLOGY
KEY ATHERNET CABLE-MANCHESTER ENCODING-
DAT 3.82
FIR CONCORD DATA SYSTEMS INC. LEXINGTON MASS.
DET MAXTIME BETW SUCCESIVE ACCESSES-HOW TOKEN ACCES TECH WORKS-ETH CABL
KAP 2.2-3.2-6

ABS THIS COMPLEX ACCES TECHNIQUE WILL BE THE ULTIMATE STANDARD ACCESS
ABS METHOD BECAUSE OF ITS TECHNICAL SUPERIORITY AND VERSATILITY -
ABS NOISE MAY CAUSE A TOKEN TO GET LOST, A NODE IN THE LOG RING MAY
ABS FAIL, OR A NEW NODE MAY BE ACTIVATED. ADDITIONALLY AN INIT PROCEDUR
ABS IS NEEDED TO SET UP AT POWER UP TIME-DIFFICULTY: TO SOLVE IT IN
ABS REAL TIME -A NODE MAY TRANSMIT DATA FOR A MAX TOKEN HOLD TIME-
ABS SEQUENCING THE LOG RING: WRAPAROUND FROM THE LOWEST TO THE HIGHEST-
ABS RESOLVING CONTENTION-CONTENDING FOR TOKEN OWNERSHIP-MEDIUM AND THE
ABS ACCESS: CSMA/CD=LIMITATIONS BASE AND BROAD AS WELL-COLLISION DETECT
ABS ON BROAD IS BIT BY BIT COMPARISON=BAD-EARTHING ETHERNET-COMPARING
ABS COSTS: TOKEN NETW IS ALWAYS 7-16% LESS EXPENSIVE
ABS
ABS
ABS
ABS "SET NEXT NODE" FRAME-"RESOLVE DEMANDERS" FRAME-"TOKEN CLAIM" FRAME

NUM 167
TIT A BYUERS GUIDE TO TODAYS VERSATILE STATISTICAL MULTIPLEXERS
AUT JAMES H. SCHAREN-GUIVEL, A.A. CARLSON
QUE DATA COMMUNICATIONS
KEY ABS SWITCHING STATISTICAL MULTIPLEXERS CONNECT N DEVICES (TERMINALS
KEY ABS TO M PORTS (N GR M)-DIAGNOSTICS - LOCAL/REMOTE LOOPBACK TESTING
KEY ABS IT IS LONG HAUL NETWORKS THAT STAT MUX OFER STRONG COMPETITION
DAT 3.82
FIR U.S. SENATE, WASHINGTON, D. C.
DET
KAP 2.2.4.3

ABS THE AUTHORS TEAMED UP TO PRODUCE THE MOST THOROUGH RESEARCH YET
ABS COMPILED FOR THE PURCHASER OF STATISTICAL MULTIPLEXER EQUIPMENT-
ABS RANGING IN PRICE FROM $1000 TO $100000-NETWORK MODELLING PROGRAMS
ABS ARE AVAILABLE TO DET OPTIMUM LOCATION AND SIZE OF ST MUX
ABS MULTIPOINT STATISTICAL MULTIPLEXERS-LINE SPEEDS FROM 150 TO 4.8KBIT
ABS ARE SUPPORTED-SPEED INTERMIX-ECHOPLEXING-FLYBACK BUFFERING DELAY=
ABS FILLER CHAR-AUTOMATIC DATA RATE RECOGNITION (ADRD)-INPUT FLOW
ABS CONTROL- X/ON X/OFF-BREAK-FOR DATA LINKS RS-232-C/CCITT V.24 -
ABS MULTIPORTING- POLLING STATISTICAL MULTIPLEXER-X.25 LEVEL 2- DDCMP-
ABS BIT STUFFING-HIGH PERFORMANCE CHIPS CAN ALSO BE EXTENDED TO HANDLE
ABS FULL PROTOCOL SUPPORT INCLUDING AUTOMATIC REPEAT REQUEST (ARQ) FOR
ABS BLOCK ERROR-FRAME LENGTH 128-256 BYTES-SATELLITE LINKS-BUFFER PRIOR
ABS EXTENSIVE COMPARISON TABLES ARE PRESENTED!!!!!!!-SYNCHRONOUS
ABS TRANSMISSION-BSC/2780/3270/3278/HDLC/SDLC-REMOTE JOB ENTRY APPL:
ABS IPARS/CDC UT200/HONEYWELL VIP/-DATA COMPRESSION/HUFFMAN ENCODING

NUM 168
TIT NEW NETWORKS ROLES.OF STATISTICAL MUX-THE NEW BREED SWITCHING MUXES
AUT JOSEPH VISVADER -THOMAS H. SCHOLL
QUE DATA COMMUNICATIONS
KEY UART/USRT/USART-STATISTICAL MULTIPLEXER-INPUT/OUTPUT FLOW CONTROL
KEY REQUEST-TO-SEND/RTS-CLEAR-TO-SEND/CTS-RS 232C-ASCII X-ON/X-OFF
KEY MULTIPLEXER MONITORING-CONTROL PORT-DIAGNOSTIC-DATA COMPRESSION
DAT 6.81
FIR TIMEPLEX INC., ROCHELLE PARK, N.J. - DIGITAL COMMUNICATIONS CORP, M
DET
KAP 2.2.4.6

ABS PART ONE OF THIS REPORT EXPLORES THE EFFECTS OF MULTIPLEXER
ABS ENHANCEMENTS IN PROGRAMMING, MONITORING, RECONFIGURATION AND
ABS DIAGNOSTICS. THE SECOND PART INTRODUCES THE MULTIPLEXERS NEWEST
ABS TALENT: SWITCHING.....ATTRACTIVE FEATURE: ABILITY TO SIMULTANEOUSL
ABS CONCENTRATE DATA FROM BOTH ASYNCH AND SYNCH TERMINALS- WITH USART U
ABS USER CAN SELECT 16 SPEEDS/3 STOP BIT COMBINATIONS/4 CHAR CODES/3
ABS PARITY SELECTIONS-TERMINAL CAN FREE ITS OWN MEMORY, DEVOTE IT TO
ABS COMPUTATION RATHER THAN COMMUNIC- INPUT/OUTPUT DATA FLOW CONTROL-
ABS MULTIPLEXER MONITORING-DATA COMPRESSION QUESTIONS-HUFFMAN ENCODING
ABS CONFIGURATION PROGRAMMING-DIP SWITCH-TOPOLOGICAL VARIATIONS-TANDEM
ABS TOPOLOGY-LARGE DISTRIBUTED TOPOLOGIES-MULTIDROPPING-.....
ABS DEMAND PORT ASSIGNMENT-IN AN UNBALANCED NETWORK, THE NUMBER OF TER
ABS MINALS CONNECTED TO ONE END DIFFERS FROM THE # OF COMPUTER PORTS
ABS ON THE OTHER-BENEFITS: LINE CONCENTRATION/FEWER COMPUTER PORTS/
ABS FEWER TERMINALS/REDUCED MULTIPLEXING EQUIPMENT

NUM 169
TIT A PERFORMANCE STUDY OF THE CAMBRIDGE RING
AUT GORDON S. BLAIR
QUE COMPUTER NETWORKS
KEY CIRCULATING SLOTS-MINI PACKET-SIMULATION-BANDWITH-EXPECTED DELAY
KEY MONITOR STATION-SHIFT REGISTER-MEAN MESSAGE INTER-ARRIVAVAL TIME
KEY MEAN DELAY-OFFERED LOAD-DATA BYTES/MINIPACKET-MINIPACKETS/SYSTEM
DAT 5.82
FIR UNI OF STRATHCLYDE
DET MINIPACKET STRUCTURE-SHIFT REGISTER LENGTH-BASIC BLOCK PROTOCOL
KAP 3.5.5 !!!!!!! EXTRA KAPITEL UBER RING SYSTEME!!!!!!!!!

ABS THE CAMBRIDGE DIGITAL COMMUNICATION RING, IN ITS PRESENT STATE
ABS OF DEVELOPMENT, IS RATHER WASTEFUL OF BANDWITH. THIS PAPER INVESTIG
ABS ATES, BY HTE USE OF SIMULATION TECHNIQUES, THE TUNING OF SYSTEM
ABS PARAMETERS, NAMELY THE NUMBER OF MINIPACKETS AND SIZE OF MINIPACKET
ABS TO MINIMISE THE EXPECTED DELAY OF MESSAGES. THE RESULTS BRING TO
ABS LIGHT CRITERIA FOR DECIDING ON THE NUMBER OF MINIPACKETS IN THE
ABS SYSTEM AND ALSO DEMONSTRATE THAT SIGNIFICANT IMPROVEMENTS IN
ABS PERFORMANCE CAN BE ACHIEVED BY INCREASING THE NUMBER OF DATA BYTES
ABS FROM THE PRESENT TWO, THE OPTIMUM VALUE DEPENDING ON THE NATURE OF
ABS THE WORKLOAD.
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NUM 170
TIT NSC: HYPERCHANNEL,HYPERBUS,HYPERCACHE,NETEX (HYPERNET)
AUT M. USPENSKY
QUE ANKUNDIGUNG IN DUSSELDORF 18. 5. 82
KEY ADAPTER-TRUNK-HOST-DEVICE-LINK-SATELLITE BUSINESS SYSTEM SBS-BIU
KEY BUS SERVICECENTER-SESSION-TRANSPORT-SCALL-TCALL-DCALL-FRAME-3270-VM
KEY MVS-RSX-BFX-NJE-IFX-TPT-CSMA/CA COLLISION AVOIDANCE-DIAL PAD UNIT-
DAT 5.82 -PRICES-INSTALLATIONS
FIR NETWORK SYSTEMS CORPORATION/GMBH NSC
DET HYPERBUS-NETEX
KAP 3.1.1

ABS HYPERNET ARCHITECTURE+FACILITIES-LAYERS-ADAPTER-INTERNETWORKING
ABS NETWORK STORAGE-NETEX LAYERS & PROTOCOLS-NETEX MASSEGES & FRAMES
ABS NETEX SESSION-NETEX INTERNAL-NETEX IN MVS+VM-NETEX UTILITIES-
ABS DRIVERS-DEVICE NETWORKING-LOGICAL CHANNEL EXTENSION-
ABS HYPERBUS: ARCHITECTURE-COMPONENTS-ADDRESSING-BSC-BIU-APPLICATIONS
ABS TERMINAL NETWORKING
ABS
ABS DAS PROSPEKT GIBT EINE KOMPAKTE BESCHREIBUNG DER GANZE PRODUKTFA
ABS MILIE IN SCHLAGWORTEN FORMULIERT UND MIT VIELEN ABBILDUNGEN
ABS VERSEHEN. SEHR AKTUELL.
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NUM 171
TIT INTERLAN'S ETHERNET TRANSCEIVER/CONTROLLER PRODUKTE
AUT ---
QUE PRODUKTBESCHREIBUNG AUF ANFORDERUNG
KEY ETHERNET-UNIBUS-QBUS-VAX-RSX-VMS-RT11-NI1010-NI2010-NI3010-BOARD-
KEY FRAME FORMAT-PREISLISTE(DEUTSCH/USA=LANK72)-BLOCKDIAGRAM-TIMING
KEY DATA DE/ENCAPSULATION-REGISTER
DAT 2.82
FIR INTERLAN MASS., USA - STEMMER ELEKTRONIK
DET TRANSCEIVER-CONTROLLER
KAP 3.2.4

ABS DAS PROSPEKT GIBT EINE EINGEHENDE PRODUKTBESCHREIBUNG DER
ABS FAMILIE. HARDWARE UND SOFTWARE. PREISLISTE.
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NUM 172
TIT CICS 81 COMMUNICATIONS INTEGRATED CIRCUITS
AUT GERARD MICHEL
QUE PROCEEDING OF THE IFIP SYMP ON LCN, FLORENCE, APRIL 82 S. 3-9
KEY VLSI CHIP-TRANSCEIVER-CONTROLLER-LEVEL1/2/3-COAX-8MBIT-2 KM-
KEY PRIORITY ALLOCATION TECHNIQUE-PACKET-STAMPED-DE/FRAMING-
KEY KAYAK-FRAME FORMAT-INIT STATE
DAT 4.82
FIR CENTRE NATIONAL D'ETUDES DES TELECOMMUNICATIONS CHEMIN DU VIEUX
DET ---
KAP ---

ABS IN THIS PAPER, THE SPECIFICATIONS FOR TWO INTEGRATED CIRCUITS,
ABS A TRANSCEIVER AND A CONTROLLER ARE DESCRIBED. THESE CIRCUITDS ARE
ABS CURRENTLY BEING DESIGNED FOR USE IN DISTRIBUTED PROCESS CONTROL
ABS OR IN OFFICE AUTOMATION. OUR MAIN AIMS IN DRAWING UP THE
ABS SPECIFICATIONS WERE: TO PROVIDE DIGITAL SPEECH TRANSMISSION
ABS AND TO FACILITATE DESIGN AT THE TRANSPORT LEVEL.
ABS
ABS PRIMARY CHARACTERISTICS
ABS COMMUNICATION ACCESS PROTOKOL
ABS ARCHITECTURE: IN FUNCTIONAL BLOCKS
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NUM 173
TIT AMOS - LOKALES NETZ AM IPP GARCHING
AUT J. MAIER, ANTON HACKL
QUE ARBEITSGESPRAECH GI-FACHAUSSCHUSS RECHNERNETZE, MANNHEIM 24.11.81
KEY CRAY-SIEMENS-AMDAHL-INTERDATA 8/16-DATEX-P-ISO-LEVEL 1/2/3/4/5/6/7
KEY X.25-MESSAGE LINK PROTOKOLL-VIRTUAL TERMINAL PROT-FILE TRANSFER PR
KEY REMOTE DATA STATION-HDLC LAP-SWITCHED VIRTUAL CIRCUIT
DAT 11.81. UND KORRESPONDENZ SPAETER
FIR IPP GARCHING
DET AMOS
KAP 3.3.1

ABS AUSGEHEND VON DER TRIPLEX KONFIGURATION DES RECHENZENTRUMS GARCHING
ABS -BESTEHEND AUS DEN MITEINANDER GEKOPPELTEN CRAY-1, SIEMENS 7880 UND
ABS AMDAHL 470 V/6 - SOLL DURCH OFFNUNG DIESES DREIECKS ERREICHT WERDEN
ABS AUCH ENTFERNTEN BENUTZERN DIE MOGLICHKEIT ZU GEBEN, VON DIESER SEHR
ABS LEISTUNGSFAEHIGEN EINRICHTUNG GEBRAUCH ZU MACHEN. BEI DER REALISIER
ABS UNG DES ISO SCHICHTENMODELLS ENTSCHIEDEN WIR UNS FUR EINE ZWEITEILG
ABS 1, DIE DREI EBENEN VON X.25 SOLLEN IN EINEM MICROCOMP IMPLEMENTIERT
ABS WERDEN (X.25 TELECOMM CONTROLLER) 2, DIE HOEHEREN PROTOKOLLE
ABS ,EBENE 4-7, WERDEN IM HAUPTRECHNER LOKALISIERT.
ABS EIN VIRTUELLES TERMINAL KONZEPT+IMPLEMENTIERUNG WIRD BESCHRIEBEN
ABS (SCROLL/PAGE MODE UND DATA ENTRY TERMINALS ANSCHLIESSBAR.
ABS TRANSACTION PROCESSOR IS A CPU THAT SEQUENTIALLY PROCESSES TRANSACT
ABS TION REQUESTS CONVEYED TO HIM BY A TR QUEUE.
ABS DER MESSAGE TRANSMISSION CONTROLLER HAT DIE AUFGABEN: INSTALL VIRT
ABS KANALEN, DATENAUSTAUSCH ZW PROZESSEN, FLUSSKONTR, BUFFERMANAGEMENT

NUM 174
TIT HYPERCHANNEL PROSPEKTE UND INFO
AUT ---
QUE KORRESPONDENZ MIT TESDATA
KEY HYPERCHANNEL-PROZESSOR/DEVICE/LINK ADAPTER-TRUNK-IBM-CRAY-PDP-CSMA
KEY KANAL-PREIS-ANWENDUNG-FRAME-DRIVER-ACCESS-INTERFACE-RSX-MVS-SAM-
KEY TCAM-VTAM-JCL-
DAT 12.81
FIR NETWORK SYSTEMS CORP - NSC- TESDATA
DET HYPERCHANNEL - ANWENDUNGEN
KAP 2.3 - 3.1.1

ABS 1, PRODUKTBESCHREIBUNG AUF DEUTSCH
ABS 2, IBM/MVS + DEC RSX DRIVERS MANUALS
ABS 3, GLANZPROSPEKT
ABS 4, LISTE UND KONFIG DER EUROPAISCHEN HC ANWENDUNGEN (KONKRETE INSTA
ABS   INSTALLATIONEN
ABS 5, ADAPTER BESCHREIBUNG (VON JEDEM ADAPTER)
ABS 6, SYSTEMBESCHREIBUNG
ABS
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NUM 175
TIT OFFNUNG GESCHL HERSTELLERNETZE AM BEISPIEL VON SNATCH
AUT VON G. GLAS
QUE ARBEITSGESPRACH DES GI FACHAUSSCHUSSES LAN, 27.11.81 MANNHEIM
KEY SNA-TRANSDATA-GATEWAY-3705-VTAM-TCAM-NCP-PDN-BCAM-X.25-
KEY ADAPTION SYSTEM-RELAY PROGRAM-SDLC-
KEY
DAT 11.81
FIR BMFT - DFVLR
DET ---
KAP 4.3

ABS WILL EIN ANWENDER BEREITS HEUTE EIN OFFENES NETZ REALISIEREN,
ABS SO BIETET SICH IHM ZWEI WEGE AN:
ABS - ANDERUNG ODER ERSETZUNG DER HERSTELLERARCHITEKTUREN
ABS - ANPASSUNG AN DIE HERSTELLERARCHITEKTUREN
ABS DER VORTRAG VERSUCHT UNTER BETRACHTUNG KONKRETER BEISPIELE
ABS KRITERIEN FUR DIE BEWERTUNG DIESER ALTERNATIVEN ZU GEBEN.
ABS BEISPIEL: PROJEKT SNATCH DFVLR
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NUM 176
TIT PLANET PROSPEKTE
AUT ---
QUE KORRESPONDENZ
KEY RING-ZWILLINGSKABEL KOAX-TERMINAL-DIRECTOR-V.24-STARTER PACK-
KEY PREISE-VIRTUAL CIRCUIT-TERMINAL ACCESS POINT TAP-CABLE ACCESS POINT
KEY CAP-TRANSPARENT-
DAT 6.82
FIR RACAL MILGO
DET PLANET
KAP 2.3 - 3.5.5

ABS FOR NETWORKING OF TERMINALS (DEVICES) - UP TO 250 VIRTUAL CIRCUITS
ABS MAINTAINED BY THE DIRECTOR - EIN DIRECTOR MUSS IMMER IM NETZ
ABS VORHANDEN SEIN (PREIS) - PERMANENT VIRTUAL CIRCUIT- SWITCHED PLAN
ABS VIRTUAL CIRCUIT - SWITCHED VIRTUAL CIRCUIT - THIRD PARTY/CONFERENCE
ABS BROADCAST -
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NUM 177
TIT LOCAL NET OFFERINGS NOW NUMBER 40
AUT BARTIK
QUE COMPUTER WORLD
KEY THE LOOP-CABLENET-DOMAIN-LRS-OMNINET-XODIAC NBS-ARC-DECDATAWAY-8100
KEY DLX-10-DLX-320-MODICON MODBUS-MODICON MODWAY-INTERFACE BUS-INTENET
KEY SERIES/1 RING-VIDEODATA-POLYNET-INFINET I-INFINET II-HYPERCHANNEL-
DAT 4.82
FIR ---
DET ---
KAP 2.3

ABS TABLE OF OFFERINGS TILL NOW (40 PIECES)
ABS
ABS -CLUSTER/ONE-NOVELL 2000-IBS-NET-RINGNET-SHINPADS-MICROLINK-
ABS STRATALINK-MARS/NET-LOCALNET-4540 LOCAL CONNECT-PACKET STREAM-
ABS UNET-NET/ONE BASEBAND-NET/ONE BROADBAND-WANGNET-ETHERNET-INFINET-
ABS Z-NET-AXIS
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NUM 178
TIT SILICONIZING THE LOCAL AREA NETWORK
AUT VERNON COLEMAN
QUE --
KEY FRONTEND/BACKEND-VLSI-ETHERNET-SERIAL INTERFACE ADAPTOR SIA-LANPC
KEY BIT STREAM CONTROLLER BSC-LINK PROTOCOLL PROZESS LPP-DATAGRAM
KEY
DAT 2.82
FIR ADVANCED MICRO DEVICES, INC.
DET ETHERNET
KAP ---

ABS FRONTEND: SLOW - SINGLE BOARD - 65 -70 CHIPS - SOME HUNDRED $
ABS BACKEND : HIGH SPEED -BUS+RING-DIFFERENT ACCESS PROTOCOLS-
ABS   PROGRAMMABLE CHIPS
ABS
ABS THIS PAPER PROVIDES AN ADVANCED VIEW OF VERY LARGE SCALE INTEGRATED
ABS PRODUCT DEVELOPMENT OCCURING IN THE FIELD OF LAN BY A MAJOR
ABS SEMICONDUCTOR COMPANY. THE INTENT IS TO EXPLAIN HIGHLIGHTS OF THE
ABS FUNCTIONALITY THAT WILL BE INCLUDED IN THESE PRODUCTS.
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NUM 179
TIT A CSMA BUS TAILORED TO LABORATORY ENVIRONMENT(LOCHNES)
AUT ARATO-SARKADI-NAGY-SULYAN-TELBISZ
QUE PROCEEDING
KEY ACCESS-STATION PRIORITY-MESSAGE PRIORITY-HOGGING-ARBITRATION-
KEY RANDOM SLOT-PRIORITY SLOT-HDLC LIKE FRAME-BIT STUFFING-
KEY LOGICAL CHANNEL-CONNECTION ENDPOINT-SELECTIVE FLOW CONTROL
DAT 12.81
FIR KFKI - ZENTRALFORSCHUNGSINSTITUT FUR PHYSYIK, UNGARN
DET ---
KAP 3.3.3

ABS WE HAVE DESIGNED A CSMA BUS ARBITRATION MECHANISM, WHICH IS SPECIAL
ABS LY TAILORED TO LABORATORY DATA ACQUISITION AND PROCESS CONTROLL SYS
ABS TEMS. THIS SYSTEM RECOGNISES BOTH STATION AND MESSAGE PRIORITIES.
ABS THIS ACCES MECHANISM IS A MODIFICATION OF THE HYPERCHANNEL ACCESS
ABS MECHANISM BUT THE POSSIBILITY OF THE MONOPOLISATION OF THE
ABS CHANNEL BY HIGH PRIORITY STATION IS ELIMINATED.
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NUM 180
TIT ETHERNET VERLASST VORAUSSICHTLICH 1983 DIE PILTPHASE/AUFWIND?
AUT GUNTHER SANDSCHEPER / HANS-PETER BOELL
QUE KOMPUTERPRAXIS
KEY LIZENZ-CSMA/CD-CHIP-PRODUKTE-INTEL-DEC-TRANSCEIVER-KOSTEN-CRC
KEY
KEY
DAT 3.82
FIR ---
DET ---
KAP 3.2

ABS
ABS ABBILDUNG/VERGLEICH ISO/DIX/XEROX/IEEE PROTOKOLL EBENEN 1-7
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ABS ABBILDUNG: POLARISIERUNG VON ENTSCHEIDUNGSMERKMALEN FUR PABX UND
ABS LAN
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NUM 181
TIT THE "WORM" PROGRAMS - EARLY EXPERIENCE WITH DISTRIBUTED COMPUTATION
AUT SCOCH - HUPP
QUE COMM OF THE ACM VOL25 NO3 3.82
KEY TAPEWORM-DISTRIBUTED COMPUTING-IDLE MACHINE-LOCATING-CONTROLLING
KEY RELEASING-MULTIMACHINE PROGRAMS
KEY
DAT 3.82
FIR XEROX PALO ALTO
DET ---
KAP ---

ABS WORM=RAUPE=HERNYO A WORM IS SIMPLY A COMPUTATION WHICH LIVES ON
ABS ONE OR MORE MACHINES. THE PROGRAMS ON INDIVIDUAL COMPUTERS ARE DESC
ABS RIBED AS THE SEGMENTS OF A WORM; EACH SEGMENT CARRIES A NUMBER
ABS INDICATING HOW MANY TOTAL MACHINES SHOULD BE PART OF THE OVERALL
ABS WORM. SEGMENTS REMAIN IN COMMUNICATION WITH EACH OTHER, SHOULD ONE
ABS SEGMENT FAIL, THE REMAINING PIECES MUST FIND ANOTHER MACHINE
ABS INITIALIZE IT, AND ADD IT TO THE WORM. AS SEGMENTS (MACHINES) JOIN
ABS AND LEAVE THE COMPUTATION, THE WORM ITSELF SEEMS TO MOVE THROUGH
ABS THE NETWORK. THE WORM MECHANISM IS USED TO GATHER AND MAINTAIN
ABS THE SEGMENTS OF THE WORM, WHILE ACTUAL USER PROGRAMS ARE BUILT
ABS ON TOP OF THIS MECHANISM. THESE TECHNIQUES WERE USED TO SUPPORT
ABS REAL APPLICATIONS: SIMPLE MULTIMACHINE TEST PROGRAMS (NETWORK SOFTW
ABS TEST), SOPHISTICATED REAL TIME ANIMATION.
ABS
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NUM 182
TIT A COMPARISON OF TWO NETWORK-BASED FILE SERVERS
AUT JAMES G. MITCHELL - JEREMY DION
QUE COMM OF THE ACM VOL 25 NO 4 S. 233-
KEY XEROX DISTRIBUTED FILE SYSTEM XFDS-CAMBRIDGE FILE SERVER CFS-BCPL
KEY ETHERNET-CAMRIDGE RING-ACCESS CONTROL-DATABASE RESEARCH-IDENTITY
KEY CAPABILITY-TRANSACTION-PROTOCOL-BBP-PUP-MINI PACKET-OVERHEAD
DAT 4.82
FIR XEROX PALO ALTO - CAMBRIDGE UNIVERSITY
DET XFDS - CFS (ETHER/CAMBR RING)
KAP 2.2.10 - 3.2.1 - 3.5.5

ABS THIS PAPER COMPARES TWO WORKING NETWORK BASED FILE SERVERS, THE XER
ABS XEROX DISTR FILE SYSTEM XDFS, AND THE CAMBRIDGE FILE SERVER CFS.
ABS BOTH SUPPORT CONCURRENT RANDOM ACCESS TO FILES USING ATOMIC TRANSAC
ABS TIONS. BOTH ARE CONNECTED TO LANS, AND BOTH HAVE BEEN IN SERVICE
ABS LONG ENOUGH TO ENABLE US TO DRAW LESSONS FROM THEM FOR THE FUTURE
ABS FILE SERVERS. WE COMPARE THE SERVERS IN TERMS OF DESIGN GOALS,
ABS IMPLEMENTATION ISSUES, PERFORMANCE, AND THEIR RELATIVE SUCCESSES
ABS AND FAILURES, AND DISCUSS, WHAT WE WOULD DO DIFFERENTLY NEXT TIME.
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NUM 183
TIT PERFORMING REMOTE OPERATIONS EFFECTIVELY ON A LOCAL COMP NETW
AUT ALFRED Z. SPECTOR
QUE COMM OF THE ACM VOL 25 NO 4
KEY PROTOCOL-ARCHITECTURE-BUS-RING-MESSAGE-DITRIBUTED COMPUTING-
KEY TRANSACTION-MODEL-REMOTE PROCEDURE CALL-REMOTE REFERENCE-SESSION
KEY RELIABILITY-SOCKET-MICROCODE
DAT 4.82
FIR STANFORD UNI
DET ---
KAP ---

ABS A COMM MODELL IS DISCRIBED THAT CAN SERVE AS A BASIS FOR HIGHLY
ABS EFFICIENT COMM SUBSYSTEM FOR LAN.THE MODEL CONTAINS A TAXONOMY OF
ABS COMM INSTRUCTIONS THAT CAN BE IMPLEMENTED EFFICIENTLY. THESE
ABS REMOTE REFERENCES CAUSE AN OPERATION TO BE PERFORMED BY A REMOTE
ABS PROCESS AND ,OPTIONALLY, CAUSE A VALUE TO BE RETURNED. ALSO
ABS PRESENTED ARE IMPLEMENTATION CONSIDERATIONS FOR A FOR A COMM
ABS SYS BASED UPON THE MODELL, AND AN EXPERIMENTAL COMM SUBSYS
ABS THAT PROVIDES ONE CLASS OF REMOTE REFERENCES. THESE REMOTE
ABS REFERENCES TAKE ABOUT 150 MICROSEC OR 50 AVERAGE INST TIMES TO PERF
ABS ORM ON ALTO COMP CONNECTED BY AN 2.94 MBIT ETHERNET.
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NUM 184
TIT GRAPEVINE: AN EXERCISE IN DISTRIBUTED COMPUTING
AUT A. BIRRELL, ROY LEVIN, R. M. NEEDHAM, M SCHROEDER
QUE COMM OF THE ACM VOL 25 NO 4 S 260
KEY DISTRIBUTED DATABASE-WORKSTATION-SERVER-CLIENT-SERVICE-ACCESS
KEY REGISTRATION-RESOURCE LOCATION-MESSAGE-MAIL SERVER-NAMING
KEY
DAT 4.82
FIR XEROX PALO ALTO
DET ---
KAP 3.2.1

ABS GRAPEVINE IS A MULTICOMPUTER SYSTEM ON THE XEROX RESEARCH INTERNET
ABS IT PROVIDES FACILITIES FOR THE DELIVERY OF DIGITAL MESSAGES SUCH AS
ABS COMPUTER MAIL; FOR NAMING PEOPLE-MACHINES AND SERVICES-; FOR
ABS AUTHENTICATING PEOPLE AND MACHINES; AND FOR LOCATING SERVICES ON
ABS THE INTERNET. GOALS: TO DESCRIBE THE SYS, AND TO SERVE AS A CASE
ABS STUDY OF REAL APPLICATION OF DISTR COMPUTING. PART I: SET OF
ABS SERVICES, HOW DATA AND FUNCTIONS ARE DIVIDED AMONG COMPUTERS ION TH
ABS INTERNET. PART II:NOVEL FACILITIES OR IMPLEMENTATION TECHNIQUES
ABS PART III: CURRENT STATE, LESSONS LEARNED SO FAR.
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NUM 185
TIT IEEE 802 LOCAL NETWORK STANDARD DRAFT B
AUT --- (UMFANG: 400 SEITEN)
QUE IEEE
KEY BUS-RING-MEDIA-CSMA/CD-TOKEN-ADDRESS-FRAME-MAU-BASEBAND-LENGTH
KEY BROADBAND-LAYER-OSI-DLMAC-CARRIER-PREAMBLE-ARCHITECTURE
KEY
DAT 10.81
FIR IEEE
DET CSMA-TOKEN-DATA LINK CONTROL
KAP 6.-2.2.7.1-3.2-3.5

ABS RECEIVED NO ENTHUSIASM
ABS NEW VERSION-DRAFT C-DIFFERENCES: FRAME STRUCTURE, MESSAGE
ABS PREAMBLES, ENCODING TECHNIQUE. ABANDONMENT OF MEDIA INDEPENDENT
ABS ACCESS TECHNIQUE, AND INSTEAD ASSOCIATE A PARTICULAR MEDIUM WITH
ABS EACH ACCESS METHOD. CSMA/CD=BASEBAND COAX CABLE, TWISTED PAIR=
ABS TOKEN RING, BROADBAND COAX=TOKEN BUS. WE WILL DEFINE A SET OF
ABS SOFTWARE PRIMITIVES TO PERMIT A PROGRAM TO ACCESS THE NETWORK.
ABS FIXED LENGTH ADDRESSING IS WANTED.
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NUM 186
TIT XEROX: INTERNET TRANSPORT PROTOCOLS ITP/ COURIER:REM PROC CALL PR
AUT -- REMOTE PROCEDURE CALL PROTOCOL (INHOUSE(?) STANDARDS)
QUE XEROX PUBLICATION
KEY PROTOCOL-LEVEL 1/2/3/4/5/6-PUP-PACKET-ETHERNET-X.25-FILE-
KEY DATA LINK-ROUTING-CONNECTION-
KEY
DAT 5.82
FIR XEROX
DET PROTOCOL
KAP 2.2.7 - 2.3 - 3.2.1

ABS COURIER: LAYER ONE: TRANSPORT - LAYER TWO: DATA TYPES
ABS LAYER THREE: MESSAGES
ABS ITP: LEVEL ZERO: TRANSMISSION MEDIA PROTOCOLS -
ABS LEVEL ONE: INTERNET DATAGRAM PROTOCOL - LEVEL TWO: RUOTING
ABS INFORMATION PROTOCOL - LEVEL TWO: ERROR PROTOCOL -
ABS LEVEL TWO: ECHO PROTOCOL LEVEL TWO: SEQUENCED PACKET PROTOCOL
ABS LEVEL TWO: PACKET EXCHANGE PROTOCOL
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NUM 187
TIT OVERCOMING LOCAL AND LONG-HAUL INCOMPATIBILITY
AUT R.H.SHERMAN-M.G.GABLE-A.CHUNG
QUE DATA COMMUNICATIONS
KEY DISTRIBUTED COMPUTER NETWORK DCNET-TERMINAL EMULATION MODE-
KEY VIRTUAL CIRCUIT-DATAGRAM-FB/CSMA/CD-STORE AND FORWARD-OSI-PORT-
KEY DRIVER-END USER-GATEWAY-HOST-PROCESS-ROUTING-GLOSSARY
DAT 3.82
FIR FORD MOTOR COMPANY, DEARBORN, MICH
DET GLOSSARY
KAP 2.3 -2.2.9 -2.2.6

ABS AFTER THE HIGHER LAYERS OF THE OSI MODELS ARE DEFINED, THEN WHAT?
ABS FORD RESEARCHERS DISCUSS THE TRIALS AND TRIBULATIONS OF DEVELOPING
ABS END-TO-END CONTROL
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NUM 188
TIT ETHERNET DATA LINK LAYER AND PHYSICAL LAYER SPECIFICATIONS VER 1.0
AUT ---
QUE DIX VEROFFENTLICHUNG
KEY CSMA/CD-FRAME-COLLISION-CARRIER-DE/ENCAPSULATION-TRANSCEIVER-CABLE
KEY COAX-IMPEDANCE-PROPAGATION DELAY-CONTROLLER-MANCHESTER ENCODING-
KEY JAM-TRANSMIT REPEAT-PREAMBLE-BINARY EXPONENTIAL BACKOFF-CRC-
DAT 9.80
FIR DEC-INTEL-XEROX=DIX
DET ETHERNET
KAP 2.2.6-3.2.1

ABS GOALS AND NON-GOALS - FUNCTIONAL MODEL OF THE ETHERNET ARCHITECTURE
ABS INTER LAYER INTERFACES-DATA LINK LAYER SPEC:
ABS FRAME FORMAT-FRAME TRANSMISSION-FRAME RECEPTION-DATALINK LAYER
ABS PROCEDURAL MODELL-
ABS PHYSICAL LAYER SPEC: PHYSICAL CHANNEL OVERVIEW AND MODEL-
ABS TRANSCEIVER CABLE COMPATIBILITY INTERFACE SPEC-COAX CABLE COMPATIBI
ABS LITY INTERF SPEC- TRANSCEIVER SPEC-CHANNEL LOGIC-CHANNEL CONFIGURAT
ABS ION REQUIREMENTS-ENVIRONMENT SPEC
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NUM 189
TIT OFF-THE-SHELF SOLUTIONS MOTIVATE NBS'S STANDARDS DRIVE
AUT R.P.BLANC-J.F.HEAFNER
QUE DATA COMMUNICATIONS
KEY ISO-ANSI-NBS-CCITT-X.25-OSI REFERENCE MODEL-LAYER 1/2/3/4/5/6
KEY INTERNET/TRANSPORT/SESSION/DATA PRESENTATION PROTOCOL-
KEY
DAT 3.82
FIR NATIONAL BUREAU OF STANDARDS, WASHINGTON DC
DET --?
KAP 6. - 2.2.7

ABS THE NATIONAL BUREAU OF STANDARDIZATION HAS STEPPED UP ITS PARTICIPA
ABS TION IN INTERNATIONAL STANDARDS ACTIVITIES TO BRIDGE THE INCOMPATIB
ABS ILITY GAP.
ABS OSI REF MODEL
ABS NBS STANDARDS
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NUM 190
TIT COMPARING FEATURES AIDS SELECTING BROADBAND LOCAL NET
AUT R.W.GIBSON
QUE DATA COMMUNICATION
KEY BROADBAND-CATV-FREQUENCY SPECTRUM-IEEE 802-PRODUCT-MODEM-BAND-
KEY EIA TR40.1-AMDAX-IS/3M-SYTEK-WANG-VIRTUAL CIRCUIT-TERMINAL CONNECTI
KEY CHANNEL-AUDIO-VIDEO-PORT-ACCESS METHOD-FDM-MODULATION-ALLOCATION
DAT 4.82
FIR BOEING COMPUTER SERVICES, SEATTLE WASH
DET BROADBAND PRODUCTS
KAP 2.2.4.3 - 6. -2.3 - 3.4.1 - 3.4.3

ABS WHY PAY FOR SWITCHING WHEN REQUIREMENTS ARE POINT-TO-POINT?
ABS THE GROWING BATTERY OF COMMERCIAL BROADBAND PRODUCTS VARY SIGNIFICA
ABS NTLY-AND THE BYER SHOULD BEWARE.
ABS
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ABS A LONG TABLE COMPARING BROADBAND PRODUCTS!!!!!!!!!!!!!!!!!!!
ABS
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ABS ASPECTS: TRANSMISSON SUPPORTED-TRFER RATE-PORT SPEEDS-HALF/FULL
ABS NO OF 6MHZ CHANNELS -NO OF PORTS-INTERFACES-MODULATION-COST
ABS
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NUM 191
TIT 13 OFTEN-ASKED QUESTIONS ABOUT BROADBAND
AUT E. COOPER
QUE DATA COMMUNICATIONS
KEY FCC-SPLITTER-COUPLER-TAP-AMPLIFIER-MTBF-DROP CABLE-TEFLON JACKET
KEY DIRECTIVITY-RESISTIVE PRESSURE TAP-ISOLATION-INSERTION LOSS-
KEY DIRECTIONAL COUPLER-RF MODEMVIDEO-FREQUENCY CHANNEL
DAT 4.82
FIR SYTEK CORP, SUNNYVALE, CALIF
DET ---
KAP 3.4 - 2.2.4.3

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ABS ONE BROADBAND PROVIDER ANSWERS MANY COMMON USER QUESTIONS
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NUM 192
TIT LOCAL NETS' GENESIS?
AUT RALPH EMMETT
QUE DATAMATION
KEY IBM-FRONT-END COMM CONTROLLER-BASEBAND-BROADBAND-ETHERNET-
KEY TWISTED PAIR-DIFFERENT PROTOCOLS-TOKEN RING-10MBIT-DEC-4300-
KEY 3705-SYSTEM/38-ZTEL-PBX
DAT 4.82
FIR ---
DET ---
KAP 4.1

ABS READY OR NOT, IBM IS ABOUT READY TO BEAR ITS OWN LOCAL NETWORKING
ABS SCHEME, WHICH IS SLATED FOR RELEASE NEXT MONTH.
ABS
ABS BASEBAND, TOKEN RING, TWISTED PAIR, COMPLETELY DIFFERENT PROTOCOLS,
ABS LESS THAN 10MBIT/S, 4300 -THE MOST SUCCESSFUL PROCESSOR- IS CHOSEN
ABS FOR NETWORKING IN THE IBM WORLD, ...
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NUM 193
TIT HOW TO CHOOSE BETWEEN HALF- AND FULL-DUPLEX SDLC
AUT T.D.SMETANKA, M.A.REED
QUE DATA COMMUNICATIONS
KEY SDLC-HALF-DUPLEX NORMAL RESPONSE MODE-FULL-DUPLEX ASYNCHRONOUS
KEY BALANCED MODE-FRAME STRUCTURE-PRIMARY-SECONDARY-SEQUENCE NUMBER-
KEY SDLC MODULO-LINK-ERROR RATE-THROUGHPUT-TRANSMISSION GROUP
DAT 2.82.
FIR IBM RESEARCH TRIANGLE PARK
DET SDLC
KAP 2.2.7.1

ABS MODEL FOR COMPARING THROUGHPUT RATES OF HALF- AND FULL-DUPLEX
ABS MODES AIDS A NETWORK MANAGER'S PLANNING
ABS
ABS LINK ERROR RATE,SDLC MODULO,FRAME SIZE,MESSAGE SIZE,LINK SPEED,
ABS ROUND TRIP DELAY CAN BE VARIED. THE MODEL OUTPUT CAN BE EITHER
ABS RESPONSE TIME OR LINK THROUGHPUT.
ABS ... FULL DUPLEX IS USUALLY A BETTER PERFORMER...
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NUM 194
TIT COLLISION-FREE LOCAL AREA BUS NETWORK PERFORMANCE ANALYSIS
AUT V.C. HAMACHER, G.S.SHEDLER
QUE IBM RESEARCH REPORT
KEY ACCESS CONTROL-BUS-CONTROL WIRE-COLLISION FREE-BOUNDED-GUARANTEED
KEY TIME-IDLE-FLIP-FLOP-SLOTTED ETHERNET-BRAM-HXDP-MARK-DISTRIBUTED CTR
KEY OPEN/CLOSED LOOP DECENTRALIZED DAISY CHAINING-QUEUEING-DELAY-THROUG
DAT 4.81.
FIR IBM SAN HOSE,UNI TORONTO
DET BUS ACCESS
KAP 2.2.6 - 4.1

ABS THIS PAPER DEALS WITH PORT ACCESS CONTROL FOR LAN. EMPHASISING PRO
ABS PERTIES OF THE ALGORITHMS AND DELAY-THROUGHPUT PERFORMANCE, WE
ABS FOCUS ON TWO COLLISION-FREE ACCESS CONTROL SCHEMES RECENTLY PROPOSE
ABS BY ESWARAN, HAMACHER AND SHEDLER. WE ALSO PROVIDE A COMPARISON OF T
ABS THESE SCHEMES TO OTHER AVAILABLE BUS ACCESS TECHNIQUES. THE PERFORM
ABS ANCE ANALYSIS IS BASED ON REPRESENTATION OF THE BUS NETWORK AS A
ABS CLOSED QUEUEING SYSTEM WITH NONPREEMPTIVE PRIORITY SERVICE.
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NUM 195
TIT ON ENHANCING LOCAL NETWORK COMMUNICATION DEVICES
AUT S. ANDLER,D. DANIELS, A. SPECTOR
QUE IBM RESEARCH REPORT
KEY VLSI-SYSTEM D-100 MHZ-MESSAGE FRAGMENTATION-LATENCY-RETRANSMISSION
KEY DUPLICATE-ACK-PUP-IP-ADDRESSING-SOCKET-HOST-PROCESS-LNI-SERVER-
KEY MICROPROC-DMA-FRONT-END-QUEUE-REMOTE TRANSACTION-SYNCHRON-
DAT 3.81
FIR IBM SAN HOSE
DET DATA LINK FUNCTIONS
KAP 4.1 - 2.2.7

ABS THIS PAPER DISCUSSES A LOCAL NETWORK COMMUNICATION DEVICE
ABS WHICH IS DESIGNED TO REDUCE MESSAGE PASSING OVERHEAD. AS HIGH
ABS SPEED LOCAL NETWORKS PROLIFERATE, EFFICIENT MESSAGE PASSING
ABS IS BECOMING INCREASINGLY IMPORTANT. TO THIS END, WE PROPOSE
ABS AN ARCHITECTURE FOR A MICROPROCESSOR BASED COMM DEVICE THAT
ABS PERFORMS MANY FUNCTIONS USUALLY LOCATED IN COMM SUBSYSYTEMS
ABS SOFTWARE. THESE INCLUDE MESSAGE FRAGMENTATION,LOGICAL
ABS ADDRESSING, AND PROCESS ADDRESSING.ADDITIONALLY WE DISCUSS
ABS A SOMEWHAT DIFFERENT ROLE FOR THE COMM DEVICE WHEREBY IT CAN
ABS SUPPORT REMOTE SYNCHRONOUS OPERATIONS TO BE PERFORMED ON
ABS NON-LOCAL MEMORY
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NUM 196
TIT SOME ISSUES ON HOMOGENOUS NETWORK INTERCONNECTION
AUT KABADA BHARATH-KUMAR, PARVIZ KERMANI
QUE IBM RESEARCH REPORTS
KEY SNA-DNA-TRANSPARENCY-PRIVACY-SECURITY-ACCOUNTING-ROUTING-ADDRESSING
KEY DATAGRAM-VIRTUAL CIRCUIT-
KEY
DAT 12.81
FIR IBM WATSON RESEARCH CENTER
DET ---
KAP ---

ABS WHILE THE GENERAL PROBLEM OF COMPUTER NETWORK INTERCONNECTION
ABS HAS RECEIVED WIDE SPREAD ATTENTION, THE PROBLEMS RELATED TO INTERCO
ABS NNECTING HOMOGENEOUS COMPUTER NETWORKS, BEING VIEWED AS A
ABS PARTICULAR CASE OF HETEROGENEOUS NETWORKS, HAVE BEEN NEGLECTED.
ABS IN THIS PAPER WE ADDRESS SOME ISSUES RELATED TO THE LATTER PROBLEM.
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NUM 197
TIT LOCAL AREA SUBNETWORKS: A PERFORMANCE COMPARISON
AUT WERNER BUX
QUE IBM RESEARCH REPORTS
KEY TOKEN RING-SLOTTED RING-EMPTY SLOT-CSMA/CD-ORDERED ACCESS BUS-MLMA
KEY NON/EXHAUSTIVE SERVICE-HOGGING-DELAY-THROUGHPUT-PERFORMANCE-
KEY OVERHEAD-MULTIPLE/SINGLE TOKEN-PROPAGATION-PACKET-LATENCY-
DAT 2.81
FIR IBM ZURICH
DET TOKEN RING
KAP 2.2.6

ABS THIS PAPER PROVIDES A COMPARATIVE EVALUATION OF THE PERFORMANCE
ABS OF RING AND BUS SYSYTEMS CONSTITUTING SUBNETWORKS OF LOCAL
ABS AREA NETWORKS. PERFORMANCE IS MEASURED IN TERMS OF THE DELAY
ABS THROUGHPUT CHARASTERISTIC. SYSTEMS INVESTIGATED INCLUDE TOKEN
ABS CONTROLLED AND SLOTTED RINGS AS WELL AS RANDOM ACCESS BUSSES
ABS AND ORDERED ACCESS BUSSES. THE INVESTIGATION IS BASED UPON
ABS ANALYTIC MODELS WHICH DESCRIBE THE VARIOUS TOPOLOGIES AND
ABS ACCESS MECHANISMS TO A SUFFICIENT LEVEL OF DETAIL. THE PAPER
ABS INCLUDES A COMPREHENSIVE DISCUSSION OF HOW THE PERFORMANCE
ABS OF THE DIFFERENT NETWORKS IS AFFECTED BY SYSTEM PARAMETERS LIKE
ABS TRANSMISSION RATE, CABLE LENGTH, PACKET LENGTH AND CONTROL
ABS OVERHEAD.
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NUM 198
TIT COLLISION FREE ACCESS CONTROL FOR COMPUTER BUS NETWORKS
AUT K.P.ESWARAN, G.S.SHEDLER, V.C.HAMACHER
QUE IBM RESEARCH REPORTS
KEY BUS-CONTROL WIRE-COLLISION FREE-BOUNDED-GUARANTEED TIME-IDLE-
KEY FLIP-FLOP-QUEUEING-DELAY-THROUGHPUT-
KEY
DAT 1.81
FIR IBM SAN HOSE, UNI TORONTO
DET ACCESS
KAP 2.2.6

ABS WE PROPOSE TWO DISTRIBUTED ACCESS CONTROL SCHEMES FOR A BUS NETWORK
ABS THE SCHEMES ARE SIMPLE AND ASYNCHRONOUS, AND PROVIDE FOR COLLISION
ABS COMMUNICATION AMONG PORTS. IN ADDITION ONE OF THE SCHEMES PROVIDES
ABS BOUNDED GUARANTEED TIME TO TRANSMISSION FOR EACH PORT. WE ALSO
ABS SHOW THAT THIS SCHEME IS EFFICIENT IN THE USE OF THE BUS BANDWIDTH
ABS IN THE SENSE THAT THERE IS ONLY A SMALL FRACTION OF TIME DURING
ABS WHICH THE BUS IS IDLE WHEN THERE IS AT LEAST ONE PACKET AVAILABLE
ABS FOR TRANSMISSION
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NUM 199
TIT EFFIC ROUND-ROBIN AND PRIORITY SCHEMES FOR UNDIRECT BROADC SYSTEMS
AUT F. A. TOBAGI ; R. ROM
QUE PROC IFIP ON LAN , ZURICH S.125
KEY
KEY
KEY
DAT 08.80
FIR TELECOMM SCIENCE CENTER SRI INTERNATIONAL MENLO PARK , CALIFORNIA
DET
KAP

ABS WE DISTINGUISH 2 MAIN ARCHITECTURES FOR CABLE BROADCAST SYSTEMS:
ABS THE BIDIRECTIONAL BRAODCAST SYSTEM (BBS) ARCHITECTURE IN WHICH
ABS TRANSMISSION IS BROADCAST IN BOTH DIRECTIONS OF THE CABLE, AND THE
ABS ABOUT CONNECTIONS; THE SOURTH IS USED IN CARRYING DATA ON AN
ABS TRANSMISSION IS FORCED INTO ONLY ONE DIRECTION.
ABS FOLLOWING A BRIEF DISCUSSION OF MULTIACCESS PROTOCOLS AND PRIORITY
ABS FUNCTIONS IN DISTRIBUTED MULTIACCESS ENVIRONMENTS WE DESCRIBE HERE
ABS A NEW AND EFFICIENT ROUND ROBIN SCHEDULING SCHEME SUITABLE FOR UBS
ABS ARCHITECTURES, DESCRIBE A SIMPLE AND EFFICIENT MECHANISM FOR
ABS PRIORITY ASSESSMENT IN BOTH BBS AND UBS ARCHITECTURES, AND THEN
ABS EXTEND THE APPLICABILITY OF THE ROUND ROBIN SCHEME TO A
ABS PRIORITIZED UNIDIRECTIONAL ENVIRONMENT.
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NUM 200
TIT CAPACITY ALLOCATION IN A MULTIPLE ACCES LOCAL AREA NETWORKS
AUT J. W.MARK
QUE PROC IFIP ON LAN , ZURICH S.139
KEY
KEY
KEY
DAT 08.80
FIR COMPUTER COMMUNIC NETW GROUP UNIVERSITY OF WATERLOO ,ONTARIO
DET --
KAP

ABS BECAUSE OF COLLISION WHEN 2 OR MORE USERS IN A MULTIPLE ACCESS
ABS NETWORK TRANSMIT SIMULTANEOUSLY, THE AVAILABLE WASTED CHANNEL
ABS CAPACITY CAN BE UTILIZED TO INFORM THE SERVER ABOUT THE NETWORK
ABS STATUS VIA THE TRANSMISSION OF A SIDE-INFORMATION. A DELAY-
ABS THROUGHPUT EXPRESSION FOR MULTIPLE ACCESS WITH SIDE-INFORMATION
ABS THROUGHPUT EXPRESSION FOR MULTIPLE ACCESS WITH SIDE-INFORMATION
ABS IS GIVEN. A PREVIOUSLY PROPOSED CONFLICT-FREE MULTIPLE ACCESS
ABS PROTOCOL, CALLED DISTRIBUTED SCHEDULING MULTIPLE ACCESS (DSMA)
ABS TOGETHER WITH ITS DELAY-THROUGHPUT PERFORMANCE, IS GIVEN AS AN
ABS EXAMPLE OF A FULLY-INFORMED SERVER QUEUEING MODEL. IT IS
ABS CONJECTURED THAT TRANSMISSION OF THE SIDE-INFORMATION OVER A SUB-
ABS CHANNEL IS MORE EFFICIENT THAN OVER THE MAIN CHANNEL.
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NUM 201
TIT LOCAL AREA SUBMETWORKS: A PERFORMANCE COMPARISON
AUT W. BUX
QUE PROC IFIP ON LAN , ZURICH S.157
KEY
KEY
KEY
DAT 08.80
FIR IBM ZURICH RESEARCH LABORATORY , RUSCHLIKON - SWITZERLAND
DET
KAP

ABS A COMPARATIVE EVALUATION OF THE PERFOMANCE OF RING AND BUS SYSTEMS
ABS CONSTITUTING SUBNETWORKS OF LAN. PERFORMANCE IS MEASURED IN TERMS
ABS OF THE DELAY-THROUGHPUT CHARACTERISTICS. SYSTEMS INVESTIGATED
ABS INCLUDE TOKEN-CONTROLLED AND SLOTTED RINGS AS WELL AS RANDOM-ACCESS
ABS BUSSES (CSMA WITH COLLISION DETECTION) AND ORDERED ACCESS BUSSES
ABS (MLMA). THE INVESTIGATION IS BASED ON ANALYTIC MODELS WHICH
ABS DESCRIBE THE VARIOUS TOPOLOGIES AND ACCESS MECHANISM TO A
ABS SUFFICIENT LEVEL OF DETAIL. THE PAPER INCLUDES A COMPREHENSIVE
ABS DISCUSSION OF HOW THE PERFORMANCE OF THE DIFFERENT NETWORKS IS
ABS AFFECTED BY SYSTEM PARAMETERS LIKE TRANSMISSION RATE ,CABLE
ABS LENGTH, PACKET LENGTH, AND CONTROL OVERHEAD.
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NUM 202
TIT PERFORMANCE MEASUREMENTS OF A LOCAL MICROCOMPUTER NETWORK
AUT P. BELANGER ; C. HANKINS ; N. JAIN
QUE PROC IFIP ON LAN , ZURICH S.181
KEY
KEY
KEY
DAT 08.80
FIR ZILOG INC. CUPERTINO - CALIFORNIA
DET
KAP

ABS
ABS ZNET IS A LOW COST, " ETHERNET" - LIKE, LOCAL MICROCOMPUTER
ABS NETWORK WITH NO DEDICATED NETWORK INTERFACE PROCESSOR. WE COMPARE
ABS THE PERFORMANCE OF 2 IMPLEMENTATIONS OF PROTOCOL SOFTWARE FOR SUCH
ABS AN ENVIRONMENT. ONE IMPLEMENTATION IS BUILT UPON A SIMPLE DATAGRAM,
ABS WITH HIGHER LEVEL SOFTWARE RESPONSIBLE FOR ENSURING RELIABLE
ABS DELIVERY. IN THE SECOND IMPLEMENTATION , A RELIABLE DATAGRAM FREES
ABS THE HIGHER LEVEL PROTOCOLS FROM THIS RESPONSIBILITY. USING
ABS PERFORMANCE METRICS AND A WORKLOAD MODEL DEFINED HEREIN, WE SHOW
ABS THAT THE SECOND IMPLEMENTATION IS FAR SUPERIOR, AND THUS DERIVE
ABS SOME DESIGN PRINCIPLES FOR NETWORK SOFTWARE IN THE MICROCOMPUTER
ABS ENVIRONMENT.
ABS
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NUM 203
TIT ON ENHANCING LOCAL NETWORK COMMUNICATION DEVICES
AUT S. ANDLER ; D. DANIELS ; A. SPECTOR
QUE PROC IFIP ON LAN , ZURICH S.191
KEY
KEY
KEY
DAT 08.80
FIR IBM RESEARCH LABORATORY SAN JOSE , CALIFORNIA
DET
KAP

ABS A LOCAL NETWORK COMMUNICATIO DEVICE IS DESIGNED TO REDUCE
ABS MESSAGE PASSING OVERHEAD. AS HIGH SPEED LOCAL NETWORKS
ABS PROLIFERATE, EFFICIENT MESSAGE PASSING IS BECOMING INCREASINGLY
ABS IMPORTANT. TO THIS END, WE PROPOSE AN ARCHITECTURE FOR A MICROPRO-
ABS CESSOR BASED COMMUNICATION DEVICE THAT PERFORMS MANY FUNCTIONS
ABS USUALLY LOCATED IN COMMUNICATION SUBSYSTEM SOFTWARE. THESE
ABS SUCH FUNCTIONS AS MESSAGE FRAGMENTATION, LOGICAL ADDRESSING,AND
ABS PROCESS ADRESSING. ADDITIONALLY, WE DISCUSS A SOMEWHAT DIFFERENT
ABS ROLE FOR THE COMMUNICATION DEVICE WHEREBY IT CAN SUPPORT REMOTE
ABS SYNCHRONOUS OPERATIONS TO BE PERFORMED ON NON-LOCAL MEMORY.
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NUM 204
TIT DESIGN CONSIDERATIONS FOR A LAN CONNECT DIVERSE PRIMITIVE MACHINES
AUT W. M. GENTLEMAN ; J. E. CORMAN
QUE PROC IFIP ON LAN , ZURICH S.207
KEY
KEY
KEY
DAT 08.80
FIR UNIVERSITY OF WATERLOO , ONTARIO - CANADA
DET
KAP

ABS OUR DESIGN DECISIONS:FIRSTLY, THE NETW COST PER SUBSCRIBER MUST
ABS BE LOW. SECONDLY, A STANDARD PORT ON THE SUBSCRIBER COMPUTER MUST
ABS BE USED. THIRD, COMMUNICATIONS PROTOCOL MUST BE VERY SIMPLE,
ABS PERHAPS BYTE-STREAM WITH PRESET VIRTUAL CIRCUITS. MORE FLEXIBLE
ABS PROTOCOLS MUST BE BUILT ON TOP OF THIS. FOURTH, GROUPS OF
ABS SUBSCIBERS CAN BE EXPECTED TO COMMUNICATE HEAVILY AMONG
ABS THEMSELVES.FILE TRANSFER WILL BE THE MAIN ACTIVITY. THIS PAPER
ABS DISCUSSES THESE AND OTHER FACTORS , SHOW WHY MOST EXISTING NETW
ABS DESIGNS ARE INAPPROPRIATE IN THIS CONTEXT, THEN , BY DESCRIBING
ABS THE NETW BEEING BUILT AT THE UNIVERSITY OF WATERLOO, ILLUSTRATES
ABS THAT SUITABLE DESIGNS ARE POSSIBLE.
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NUM 205
TIT OLIVETTI LOCAL NETWORK SYSTEM PROTOCOL ARCHITECTURE
AUT V. B. HUNT ; P. C. RAVASIO
QUE PROC IFIP ON LAN , ZURICH S.223
KEY
KEY
KEY
DAT 08.80
FIR TELECOM SCIENCE CENTER SRI INTERN CALIF , CORP SYST RES OLIV ITALY
DET
KAP

ABS THE OLIVETTI LOC NETW SYSTEM PROTOCOL ARCHITECTURE IS A
ABS COMPONENT OF THE OLIVETTI LOC NETW SYST ARCHITECT. THE ISO OPEN
ABS SYSTEM INTERCONNECTION REFERENCE ARCHITECTURE WAS USED AS A
ABS REFERENCE GUIDE FOR THE ARCHITECTURE. OUR ARCHITECT PROVIDES THE
ABS PRINCIPAL STUCTURES, ATTRIBUTES AND COMPONENT INTERFACES OF THE
ABS COMMUNICATION SYSTEM TO GUIDE DESIGN AND IMPLEMENATION OF SPECIFIC
ABS PROTOCOLS. FUNDAMENTAL MECHANISM EMPLOYED INCLUDE A COMMUNICATION
ABS MODEL, LAYERING , AND FUNCTIONAL DIVISION. THE COMM MODEL IS BASED
ABS ON AN ABSTRACT COMM PRIMITIVE CALLED A CHANNEL. THE MODEL IS
ABS APPLICABLE AT ALL LEVELS IN THE HIERARCHY OF LAYERS. THE ARCH
ABS DEFINES 6 LAYERS INCLUDING PHYSICAL LINK,TRANSPORT, SYNCHRONIZATION
ABS ERROR MANAGEMENT, CONTROL, AND MONITORING. FUNCTIONAL DIVISION IS
ABS APPLIED UNIFORM TO EACH LAYER TO ACHIEVE A COHERENT OVERALL STRUC.
ABS ISSUES SUCH AS PERFORMANCE-NAME RECOGNITION-FLOW CONTROL ARISING-
ABS ASSOCIATED IMPLEMENTATION .

NUM 206
TIT A CAMBRIDGE RING LAN REALISATION OF A TRANSPORT SERVICE
AUT I. N. DALLAS
QUE PROC IFIP ON LAN , ZURICH S.245
KEY
KEY
KEY
DAT 08.80
FIR UNIVERSITY OF KENT AT CANTERBURY ENGLAND
DET
KAP

ABS A NETW INDEPENDENT TRANSPORT SERVICE HAS BEEN DEFINED IN THE UNITED
ABS KINGDOM. FROM THE SERVICE DESCRIBTION, VARIOUS PROTOCOLS CAN BE
ABS DERIVED TO PROVIDE THE SERVICE OVER PARTICULAR COMMUNICATIONS MEDIA
ABS THE PAPER GIVES A BRIEF DESCRIBTION OF THIS TRANSPORT SERVICE AND
ABS GOES ON TO DESCRIBE ITS REALISATION,(ENCODING), FOR THE CAMBRIDGE
ABS RING LAN IN OPERATION AT THE UNIVERSITY OF KENT. THIS REALISATION
ABS USES AN EXISTING RING PROTOCOL. THE CONCLUSIONS DERIVED FROM THE
ABS PROJECT ARE GIVEN AT THE END OF THE PAPER.
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NUM 207
TIT TRANSPORT LAYER - LONG-HAUL VS. LOCAL NETWORK
AUT A. DANTHINE ; F. MAGNEE
QUE PROC IFIP ON LAN , ZURICH S.271
KEY
KEY
KEY
DAT 08.80
FIR UNIVERSITY OF LIEGE , BELGIUM
DET
KAP

ABS THREE LAYER MODEL - LONG HAUL VS LOCAL NETWORKS - NETWORK
ABS NETWORK WIDE NAME SPACE - CONNECTION ORIENTED COMMUNICATION :
ABS CONNECTION ESTABLISHMENT , LETTERS, TELEGRAMS, CONNECTION
ABS TERMINATION, - MESSAGE-ORIENTED COMMUNICATION : DESTINATION
ABS PROCESS, LETTERGRAMS - SERVICES OFFERED BY THE TRANSMISSION
ABS LAYER - CONNECTION-ORIENTED COMMUNICATION : CONNECTION
ABS ESTABLISHMENT, LETTERS, SEQUENCING AND DUPLICATE DETECTION,
ABS LOSS DETECTION AND RECOVERY, CONTENTS INTEGRITY, ENCRYPTION,
ABS - TELEGRAMS: SEQUENCING AND DUPLICATE DETECTION, LOSS
ABS DETECTION AND RECOVERY - CONNECTION TERMINATION - MESSAGE
ABS ORINTED COMMUNICATION
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NUM 208
TIT A LOOSELY-COUPLED I/O SYSTEM FOR A DISTRIBUTED ENVIRONMENT
AUT D. R. CHERITON
QUE PROC IFIP ON LAN , ZURICH S.297
KEY
KEY
KEY
DAT 08.80
FIR DEPART OF COMP SCIENCE UNIVERS OF BRITISH COLUMBIA , VANCOUVER
DET
KAP

ABS THE DESIGN OF A LOOSELY-COUPLED I/O SYSTEM IS PRESENTED THAT
ABS PROVIDES A BYTE-ORIENTED AND BLOCK ORIENTED I/O ABSTRACTION IN A
ABS DISTRIBUTED ENVIRONMENT. THE DESIGN IS BASED ON A SIMPLE PROTOCOL
ABS BETWEEN CLIENT PROCESSES AND I/O SERVER PROCESSES. THE I/O SYSTEM
ABS IS LOOSELY-COUPLED IN THE SENSE THAT IT EXISTS AS A PROTOCOL OR
ABS CONVENTION AMONG THE CLIENT PROCESSES AND THE SERVER PROCESSES.
ABS THE I/O SYSTEM CONVENTS OF: A LIBRARY OF FUNCTIONS THAT IMPLEMENTS
ABS THE PROTOCOLS IN TERMS OF A SET OF MESSAGE PRIMITIVES, A SET OF
ABS PARTICIPATING I/O SERVER PROCESSES, AND AN I/O SERVER AND FILE
ABS IDENTIFICATION SCHEME THAT SUPPORTS SYMBOLIC NAMING OF FILES. THE
ABS FUNCTION LIBRARY MAKES THIS UNDERLYING STRUCTURE TRANSPARENT TO THE
ABS APPLICATION OF THE PROGRAMMER. THE MESSAGE PRIMITIVES MAKE THE
ABS PROTOCOL IMPLEMENTATION INDEPENDENT OF THE UNDERLYING NETWORK
ABS CONFIGURATION AND HARDWARE.
ABS

NUM 209
TIT AN INTER-PROCESS COMMUNICATION FACILITYFOR UNIX
AUT R. F. RASHID
QUE PROC IFIP ON LAN , ZURICH S.319
KEY
KEY
KEY
DAT 08.80
FIR DEPART OF COMP SCIENCE CARNEGIE-MELLON UNIVERSITY PITTSBURGH
DET
KAP

ABS AN INTER-PROCESS COMMUNICATION FACILITY IMPLEMENTED AT CARNEGIE-
ABS MELLON UNIVERSITY FOR VAX/UNIX VERSION 7 IS DESCRIBED. THIS
ABS FACILITY WAS DESIGNED TO PROVIDES LANGUAGE, OPERATING SYSTEM AND
ABS MACHINE INDEPENDENT COMMUNICATION BETWEEN PROCESSES PERFORMING
ABS DISTRIBUTED COMPUTATIONS (POSSIBLY COMMUNICATING VIA A LAN). ITS
ABS RELATIONSHIPS RO PREVIOUSLY EXISTING UNIX FACILITIES AND OTHER
ABS SYSTEMS FOE DISTRIBUTED COMUTING ARE DISCUSSED.
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NUM 210
TIT SWALLOW: A DISTRIBUTED DATA STORAGE SYSTEM FOR A LOCAL NETWORK
AUT D. P. REED ; L. SVOBODOVA
QUE PROC IFIP ON LAN , ZURICH S.355
KEY
KEY
KEY
DAT 08.80
FIR M.I.T. LABORATORY OF COMPUTER SCIENCE CAMBRIDGE MASSACHUSETTS
DET
KAP

ABS SWALLOW IS AN EXPERIMENTAL PROJECT THAT WILL TEST FEASIBILITY OF
ABS SEVERAL ADVANCED IDEAS ON THE DESIGN OF OBJECT ORIENTED DISTRIBUTED
ABS SYSTEMS. ITS PURPOSE IS TO PROVIDE A RELIABLE, SECURE AND EFFICIENT
ABS STORAGE IN A DISTRIBUTED ENVIRONMENT CONSISTING OF MANY PERSONAL
ABS MACHINES AND ONE OR MORE SHARED DATA STORAGE SERVERS. SWALLOW
ABS IMPLEMENTS A UNIFORM INTERFACE TO ALL OBJECTS ACCESSIBLE FROM A
ABS PERSONAL COMPUTER: THESE OBJECTS CAN BE STORED EITHER ON THE LOCAL
ABS STORAGE DEVICE OR IN ONE OF THE DATA STORAGE SERVERS. THE DATA
ABS STORAGE SERVERS PROVIDE STABLE, RELIABLE, LONG-TERM STORAGE. THE
ABS ACCESS CONTROL TO OBJECTS IN THE DATA STORAGE SERVERSIS BASED ON
ABS ENCRYPTING THE DATA; ENCRYTION IS USED TO PREVENT BOTH UNAUTHORIZED
ABS MODIFICATION. SWALLOW CAN HANDLE EFFICIENTLY BOTH VERY SMALL AND
ABS VERY LARGE OBJ AND IT PROVIDES MECHANISMS FOR UPDATING OF A GROUP
ABS OF OBJ AT ONE OR MORE PHYSICAL NODES IN A SINGLE ATOMIC ACTION.
ABS

NUM 211
TIT COMMUNIC DISTRIB PROCESS: A LANGUAGE CONCEPT FOR DISTR PROG IN LAN
AUT M. T. LIU ; C. M. LI
QUE PROC IFIP ON LAN , ZURICH S.375
KEY
KEY
KEY
DAT 08.80
FIR DEPART OF COMPUTER SCIENCE THE OHIO STATE UNIVERS COLUMBUS - OHIO
DET
KAP

ABS A CONCEPTUAL DESIGN OF A NEW PROGRAMMING LANGUAGE CONSTRUCT, COMM
ABS DISTRIBUTED PROCESSES (CDP), FOR DISTRIBUTED PROGRAMMING. THE MAIN
ABS GOAL OF CDP IS TO PROVIDE A TOOL FOR BOTH DISTRIBUTED APPLICATION
ABS PROGRAMMING AND DISTRIBUTED SW DESIGN IN DISTRIBUTED COMPUTING
ABS ENVIRONMENTS, CHARACTERIZED BY COMM DELAY AND FAILURE, MULTI-PROCES
ABS COMM, ETC. FEATURES AND PROBLEMS IN DISTRIBUTED PROGRAMMING ARE
ABS FIRST INTRODUCED, AND THREE APPROACHES TO DISTRIBUTED PROGRAMMING
ABS ARE THEN DESCIBED. CDP IS NEXT DEFINED AND TWO EXAMPLES ARE GIVEN
ABS TO SHOW THAT THE CDP APPROACH IS BETTER THAN OTHERS. FINALLY,
ABS ADVANTAGES OF CDP AS WELL AS ITS IMPLEMENTATION ISSUES ARE
ABS DISCUSSED.
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NUM 212
TIT LOCAL NETWORK ARCHITECTURE FOR PROCESS CONTROL
AUT M. S. SLOWMAN ; S. PRINCE
QUE PROC IFIP ON LAN , ZURICH S.407
KEY
KEY
KEY
DAT 08.80
FIR DEPARTMENT OF COMPUTING IMPERIAL COLLEGE LONDON ENGLAND
DET
KAP

ABS THE PHYSICAL DISTRIBUTION OS EQUIPMENT AND MACHINERY ON AN
ABS INDUSTRIAL SITE MAKES IT PARTICULARLY SUITABLE FOR IMPLEMENTING
ABS DISTRIBUTED COMPUTER CONTROL SYSTEMS. THERE IS ALSO A NEED FOR A
ABS SERIAL COMM SYS EVEN FOR CENTRALISED CONTROL SO AS TO SAVE ON
ABS WRITING COSTS, WHICH CAN BE SUBSTANTIAL.THIS PAPER IDENTIFIES THE
ABS COMM RQUIREMENTS FOR DISTRIBUTED PROCESS CONTROL SYS AND INDICATES
ABS THE MAIN DIFFERENCES BETWEEN PROC CONTROL AND OTHER APPLICATION
ABS AREAS. A NETW ARCH FOR PROC CONTROL WHICH CATERS FOR ARBITRARY
ABS POINT-TO-POINT OR BROADCAST DATA LINKS IS PRESENTED. THE ARCH IS
ABS BASED ON THE LOWER 4 LAYERS OF THE ISO OPEN SYS REFENCE MODEL. THE
ABS SERVICES PROVIDED AND FUNCTIONS PERFORMED BY EACH LAYER IS
ABS DESCRIBED. NETW MANGEMENT IS ALSO BRIEFLY DISCUSSED.
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NUM 213
TIT CARRYING VOICE TRAFFIC THROUGH AN ETHERNET LOCAL NETW: GEN OVERV
AUT J. F. SHOCH
QUE PROC IFIP ON LAN , ZURICH S.429
KEY
KEY
KEY
DAT 08.80
FIR XEROX PALO ALTO RESEARCH CENTER CALIFORNIA
DET
KAP

ABS THE SPOKEN WORD REMAINS AS AN IMPORTANT MODE OF COMMUNICATION
ABS - IN THE FORM OF TWO-WAY CONVERSATIONS, ONE-WAY BROADCASTS, OR
ABS NON-REAL TIME APPLICATIONS (DICTATION, VOICE MESSAGE SYSTEMS, ETC.)
ABS WE EXPLORE THE STRAIGHTFORWARD WAYS IN WHICH A JOINT SERVICE CAN BE
ABS PROVIDED ON A MULTI-ACCESS BUS WITH DISTRIBUTED CONTROL. THE
ABS ETHERNET SYSTEM HAS PROVEN TO BE AN ATTRACTIVE ARCHITECTURE FOR
ABS CARRYING DATA TRAFFIC, AND CAN WITH EASE SUPPORT FULL TELEPHONE
ABS SERVICE AND OTHER VOICE-BASED APPLICATIONS. USING THIS KIND OF
ABS LOCAL COMPUTER NETWORK, ONE CAN BUILD A FULLY-DISTRIBUTED VOICE
ABS SYSTEM IN WHICH THERE IS NO NEED FOR A CENTRAL CONTROLLER OR SWITCH
ABS AGAINST THE BACKGROUND,WE THEN DESCIBE A PROTOTYPE VOICE SYST WHICH
ABS HAS BEEN USED TO CARRY VOICE ON AN EXISTING ETHERNET INSTALLATION,
ABS SUPPORTING BOTH REAL TIME TELEPHONE CONVERSATIONS AND A VOICE RECOR
ABS FACILITY.HOW MANY TELEPHONE USERS COULD BE SUPPORTED ON 1 NETW.
ABS THIS NR RANGES FROM SEVERAL HUNDRED TO SEVERAL THOUSAND USERS.

NUM 214
TITDATENKOMMUNIKATION IM WANDEL
AUTK. SCHROEDER
QUEPROCEEDINGS DECUS MUENCHENMAERZ 1982
KEYSTANDARDS - NORMUNG - PROTOKOLLE - TRAEGERTECHNOLOGIEN
KEYOFFENE NETZE - LOKALE NETZE - POST - NETZDESIGN - RM/OSI
KEYIEEE - ECMA - CCITT - DATEX-P
DAT03.82
FIRSOFTLAB GMBH MUENCHEN
DET ---
KAP

ABS ES WIRD VERSUCHT, DIE ENTWICKLUNGSTRENDS AN EINZELNEN TEIL-ASPEKTEN
ABS DER DATENKOMMUNIKATIONAUFZUZEIGEN. DABEI SIND DIESE ASPEKTE NICHT
ABS ADDITIV, SONDERN UEBERDECKEN SICH ZUM TEIL, BZW. BEDINGEN SICH
ABS GEGENSEITIG. ENTWICKLUNGEN UND TRENDS WERDEN IN FOLGENDEN BEREICHEN
ABS BETRACHTET: TRAEGERTECHNOLOGIEN, UEBERTRAGUNGSFORMEN, VERWENDUNG
ABS BENUTZERSCHNITTSTELLE, NETZWERKTECHNOLOGIEN (HERSTELLER - OFFENE
ABS LOKALE NETZE), DC-DIENSTE DER POST, DC-STANDARDS UND NORMEN.
ABS AUS DEN TRENDS WERDEN FOLGERUNGEN GEZOGEN FUER DIE:
ABS NETZLANDSCHAFT DER ZUKUNFT, WECHSELBEZIEHUNG ZWISCHEN
ABS DATENVERARBEITUNG UND DATENKOMMUNIKATION, TECHNISCHEN
ABS HERAUSFORDERUNGEN IN DEN 80ERN.
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NUM 215
TIT USING LAN FOR CARRYING ONLINE VOICE
AUT D. COHEN
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR DANNY COHEN , CALIFORNIA
DET
KAP

ABS THE USE OF LAN TECHNOLOGY FOR LOCAL ONLINE INTERACTIVE VOICE COMM
ABS HAS RECENTLY ATTRACTED THE INTEREST OF MANY RESEARCHES AROUND THE
ABS WORLD. DIGITAL LOCAL HANDLING OF VOICE COMMUNICATION IS NOT NEW IN
ABS A NON-PACKET MODE. TDM CONNECTIONS FOR DIGITIZED VOICE HAVE BEEN IN
ABS USE FOR LONG TIME BY THE PHONE COMPANIES. ON TRUNKS LIKE T1 AND T2.
ABS THE NEW RESEARCH IS FOCUSED ON THE APPLICATION OF LOCAL PACKET
ABS SWITCHING NETW FOR VOICE COMMUN .THIS PAPER ARGUES THAT THE MAJOR
ABS ISSUE IS THE COMPATIBILITY WITH LONG HAUL PACKET VOICE COMMUN AND
ABS NOT THE TECHNOLOGY REQUIRED FOR ACHIEVING THE PERFORMANCE NEEDED TO
ABS SUPPORT LOCALLY A LARGE NUMBER OF INTERACTIVE VOICE CONNECTIONS.
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NUM 216
TIT CARTHAGE: A MULISERVICE LAN ON A FIBER, OPTICS LOOP
AUT J.L. FAVRE
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR CENTRE COMMUN D'ETUDES DE TELEDIFF ET TELECOMMUNIC,RENNES - FRANCE
DET
KAP

ABS THE GOAL OF THE CARTHAGE PROJECT IS TO PROVIDE THE FUTURE OFFICES
ABS OF THE C.C.E.T.T. (COMMON RESEARCH CENTER IN BROADCASTING AND
ABS TELECOMMUNICATIONS) WITH A MULTISERVICE LOCAL NETW. THIS NETW WILL
ABS BE ABLE TO SERVE A 500-PERSONS COMMUNITY AND CARRY INFORMATION
ABS KIND AS VIDEO, DATA AND VOICE. THE SERVICES PROVIDED BY IT WILL BE
ABS SUCH AS ELECTRONIC MAIL, TELEMATICS, SWITCHED AND BROADCAST
ABS TELEVISION , ETC ..
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NUM 217
TIT VOICE TRANSMISSION OVER AN ETHERNET BACKBONE
AUT P.C. RAVASIO, R. MARCOGLIESE, R. NOVARESE
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR OLTECO - OLIVETTI TELECOMM
DET
KAP

ABS RESULTS OF SIMULATION STUDIES PERFORMED IN OLTECO ABOUT VOICE
ABS AND DATA TRANSMISS USING AN ETHERN BACKBONE. THE 2 SECTION
ABS PRESENTS THE BASIC PRINCIPLE APPLIED FOR VOICE TRANSMISS AND AN
ABS OVERVIEW OF PROBLEMS ARISING IN USING PACKET SWITCHING NETW FOR
ABS FOR TRANSMISS OF DIGITIZED VOICE. IN SECTION 3 THE BASIC PROTOCOL
ABS USED TO HANDLE REAL TIME VOICE FLOW, AND A BRIEF DESCRIPTION OF A
ABS PROTOTYPE IMPLEMENTATION ARE GIVEN. 4. AN OUTLINE OF OUR SIMULATION
ABS MODEL IS PRESENTED. FINALLY IN SECTIONS 5 AND 6 DISCUSSION ON
ABS RESULTS AND CONCLUSION FOLLOW.
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NUM 218
TIT A LAN BASED ON A RELIABLE TOKEN-RING SYSTEM
AUT W.BUX,F. CLOSS, P.A. JANSON, K. KUEMMERLE, H.R. MUELLER,ROTHAUSER
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR IBM ZURICH RESEARCH LABORATORY , SWITZERLAND
DET
KAP

ABS THE ARCHITECTURE OF LOCAL AREA COMMUN NETW DESIGNED AND IMPLEMENTED
ABS IS DESCRIBED. A TOKEN-RING SUBNETW ALLOWS FOR A LOW-COST ENTRY
ABS POINT; GROWTH POTENTIAL TO LARGE NETW IS PROVIDED THROUGH INTERCONN
ABS RINGS BY BRIDGES AND A HIGH PERFORMANCE STORE-AND-FORWARD NODE,
ABS CALLED BLOCK SWITCH. TO ENSURE RELIABLE TOKEN-RING OPERATION, WE
ABS EMPLOY THE CONCEPT OF A MONITOR FUNCTION. WE ALSO SHOW HOW, IN
ABS ADDITION TO THE TRANSMISSION OF DATA FRAMES, ATOKEN-RING CAN PROVID
ABS SYNCHRONOUS CHANNELS, E.G., FOR VOICE SERVICES. ALL FUNCTIONS ABOVE
ABS NETW ACCESS AND THE BASIC TRANSPORT MECHANISM ARE EXECUTED ON AN
ABS END-TO-END BASIS. THUS, BLOCK SWITCHING AND BRIDGES CAN BE COMPLETE
ABS IMPLEMENTED IN HW, ALLOWING EASY OBTAINMENT OF AN AGGREGATE
ABS THROUGHPUT CAPACITY IN THE ORDER OF 100 MBPS.
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NUM 219
TIT TOTALLY DISTR, REDUNDANTLY STRUCT HW AND SW LOC COMP CONTROL NETW
AUT D. DAMSKER
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR DR. DOREL DAMSKER NEW TECHNOLOGY DEPARTM , NEW YORK
DET
KAP

ABS THE FOLLOWING IS A PRESENTATION OF A NEWLY DEVISED LOACAL COMPUTER
ABS NETW. THE CONTROL SYSTEM FEATURES A MODULAR LOCAL COMPUTER NETW,
ABS WHOSE REDUNDANCY CAN BE DESIGNED TO MEET ANY AVAILABILITY
ABS REQUIREMENT OF A SPECIFIC APPLICATION, USING THE SAME HW BUILDING
ABS BLOCKS. THE INTRINSIC REDUNDANCY APPLIES TO THE COMPONENT LEVEL,
ABS WITH AN ORDERLY OVERLAPPING, AS OPPOSED TO A COMPLETE SYSTEM
ABS REDUNDANCY WHICH IS MORE COSTLY AND LESS RELIABLE. THE CONTROL SW
ABS IS HIERARCHICAL AND DISTRIBUTED ORGANIZED WITH A REDUNDANT STRUCTUR
ABS AND TOPOLOGY. THE LOC COMP NETW USES SIMPLE PACKET SWITCHING AND
ABS ROUTING DECISION-MAKING TECHNIQUES, BASED ON A CONTENTION METHOD,
ABS WHICH PRESENTS THE ADVANTAGE OF CONVEYING MESSAGES IN HTE ORDER OF
ABS THEIR PRIORITY. SOME DETAILS OF THE CONCEPT ARE PRESENTED AS THEY
ABS APPLIED TO THE SOLAR COGENERETION CONCEPTUAL DESIGN.
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NUM 220
TIT HISTORY AND DEVELOPMENT OF THE EPICS LOCAL COMPUTER NETWORK
AUT H. KAWAI
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR SW TECHNOLOG CENTER , JAPAN
DET
KAP

ABS THE EPICS CENTRALIZED CHANNEL LEVEL HETEROGENEOUS LOCAL COMP
ABS NETW HAS BEEN USED FOR THE LAST NINE YEARS BY ONE HUNDRED USERS
ABS FOR PATTERN INFORMATION RESEARCH. THE MAJOR OBJECT OF RESEARCH
ABS HAS BEEN A LARGE-SCALE ONLINE SYNERGETIC COMPUTING FACILITY
ABS CAPABLE OF INTERACTING WITH INVIDUAL COMPUTER SYSTEMS DESIGNED
ABS FOR SPECIFIC FIELDS OF RECOGNITION RESEARCH: HANDWRITTEN CHINESE
ABS CHARACTERS, PICTURES, SPEECH, SCENES, AND NATURAL LANGUAGE. EPICS
ABS WAS DEVELOPED AS A STAR-CONFIGURATION COMPUTER COMPLEX IN EHICH
ABS A CENTER-HOST PROVIDES USERS WITH A TSS ENVIRONMENT, AND SIX
ABS PERIPHERAL-HOSTS COMMUNICATE WITH EACH OTHER THROUGH NEWLY DEVE-
ABS LOPED HW, CONTROLLED BY A PROGRAM RESIDENT IN THE CENTER-HOST.
ABS HIGH-LEVEL PROTOCOL USAGE TRENDS FOR THE LAST 9 YEARS,FRONT-END
ABS PROTOC PROCESS BY HETEROG MINICOMP,AIMED AT OVERCOMING CONFLICTS
ABS BETWEEN PROTOC- AND DATA PROCESS IN THE CENTER-HOST,VIRTUAL JAPANES
ABS DOCUMENT TRANSFER AMONG 3 HETROGENOUS COMPUTER.

NUM 221
TIT ADMINISTRATOR CONTENTION OPTICAL RADIAL NETWORK-ACORN
AUT T. KUNIKYO, T, OZEKI
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR TOSHIBA R & D CENTER , KAWASAKI , JAPAN
DET
KAP

ABS OPTICAL PASSIVE STAR NETW ARE CHARACTEIZED BY HIGH BANDWIDTH LENGTH
ABS (BW-L) PRODUCT, HIGH RELIABILITY AND RESONABLY KARGE STATION NR.
ABS THIS PAPER PRESENTS TWO OPTICAL STAR NETW WITH COMBINED PACKET SWIT
ABS AND CICUIT SWITCHING CAPABILITIES: ACORN AND RACORN. ACORN'S PACKET
ABS SWITCHING IS CHARACTERIZED BY SIMPLICITY AND RACORN'S PACKET SWITCH
ABS IS CHARACTERIZED BY HIGH BW-L PRODUCT. BOTH NETW ADOPT ORDERED TIME
ABS SLOTS ASSIGNMENT COTROLLED BY AN ADMINISTRATOR WHICH IS SELECTED ON
ABS CONTENTION BASIS FROM AMONG THE STATIONS. ANALYSIS HAS SHOWN THAT
ABS BOTH PACKET SWITCHING MECHANISMS ARE APPLICABLE TO REAL TIME
ABS SYSTEMS.
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NUM 222
TIT TRANSMISSION IN A SYNCHRONOUS TOKEN RING
AUT H.R. MUELLER, H. KELLER, H. MEYR
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR IBM RESEARCH , ZURICH ; RWTH , AACHEN
DET
KAP

ABS A SYNCHRONOUS TOKEN-RING IS THE SUBNETW TECHNOLOGY CHOSEN FOR THE
ABS EXPERIMENTAL LAN AS DIRECTED AND IMPLEMENTED. THE FOLLOWING KEY
ABS POINTS ARE ADRESSED: 1) WRITING CONCEPT; 2) CODE SELECTION ;3) RING
ABS SYNCHRONIZATION BY MEANS OF PHASE-LOCK LOOPS. WIRING OF A SINGLE
ABS RING IS BASED ON A TWO-LEVEL HIERARCHIE WITH PASSIVE OR ACTIVE
ABS DISTRIBUTION OR PANELS PLACED AT CONVENIENT LOCATIONS IN A BUILDING
ABS STATIONS ARE CONNECTED TO THE DISTRIBUTION PANELS BY MEANS OF
ABS RELAYS(PASSIVE PANEL) OR VIA ACTIVE PANELS VIA ELECTRONIC GATES
ABS IN A STAR TYPE ARRANGEMENT.
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NUM 223
TIT COMONET: AN INTRA BUILDING DATA LINK
AUT T.L. STERLING, R.D. WILLIAMS, J.L. KIRTLEY
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR MASS INST OF TECHNOL ELECTR POWER SYSTENGENEER LAB , CAMBRIDGE MASS
DET
KAP

ABS COMONET IS A LOC NETW ARCHITECTURE DEVELOPED TO SUPPORT THE COMMUNI
ABS NEEDS OF DISTRIBUTED INTRA-BUILDING SYSTEMS FOR CONTROL AND MONITOR
ABS APPLICATIONS COMPRISING MANY PORTS WITH LOW COMMUNIC DEMAND. A SET
ABS OF SPECIFICATIONS FOR THIS CLASS OF DATA LINK SYSTEMSIS PRESENTED.
ABS TWO SIGNAL PATHS ARE USED, ONE FOR ARBITRATION AND THE OTHER FOR
ABS DATA TRANSFERS. LINK ARBITRATION AND DATA TRANSFER CONTROL ARE
ABS IMPLEMENTED WITH DISTRIBUTED MECHANISMS. COMONET SUPPORTS SEPARATE
ABS SYSTEMS SIMULTANEOUSLY AND OPERATES IN ENVIRONMENTS CHARACTERIZED
ABS BY HIGH PEAK TO AVERAGE QUEUE RATIONS.
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NUM 224
TIT LAN : TECHNICAL ISSUES- USER SERVICES- SORT IMPACT
AUT W. JENSEN
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR UNIVERSITY OF TROMSO, NORWAY
DET
KAP

ABS THERE IS AN OVERWHELMING INTEREST IN LOCAL-OR PRIVATE- NETW. TIME
ABS HAS COME TO ADVISE A SHIFT IN THIS INTEREST FROM THE LOWER LAYERS
ABS OF BASIC TECHNOLOGY TO ARCHITECTURAL ISSUES AND USER SERVICE
ABS
ABS CAPABILITIES. THE ARCHITECTURAL RELATIONSHIP TO THE OSI MODEL IS OF
ABS PARTICULAR IMPORTANCE WHEN DISCUSSING INTERNETWORKING ISSUES. THE
ABS CONSTRUCTION OF DISTRIBUTED INTERWORKING APPLICATION SYSTEMS
ABS OFFERINGUSER SERVICES TO PERSONAL WORKSTATIONS REPRESENTS MANY
ABS TECHNICAL AND ANALYTICAL CHALLENGES: APPLICATION LAYER PROTOCOL
ABS DESIGN, HUMAN COMPUTER INTERACTION FACILITIES, TECHNICAL AND
ABS ORGANIZATIONAL INTEGRATION OF SERVICES.
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NUM 225
TIT FURTHER DEVELOP ON THE CAMBRIDGE RING NETW AT THE UNI OF KENT
AUT S.E. BINNS, I.N. DALLAS, E.B. SPRATT
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR COMP LABORATORY , UNIV OF KENT , CANTERBURY , ENGLAND
DET
KAP

ABS IT IS IN PART BASED ON THE MATERIAL IN (20). A GENERAL INTRODUCTION
ABS TO THE SUBJECT OF LAN IS GIVEN IN (05), AND EXTENSIVE BIBLIOGRAPHY
ABS IS GIVEN IN (16). TH E READER WHO IS UNFAMILIARY WITH CAMBRIDGE
ABS RINGS WILL FIND A BRIEF DESCRIPTION IN APPENDIX 1. MORE DETAILED
ABS ACCOUNTS ARE GIVEN IN (10) AND (22). APPENDIX 2 CONTAINS INFORMAT
ABS ON LAN ISSUES IN THE CONTEXT OF UK UNIVERSITIES AND US UNIVERSITIES
ABS RESPECTIVELY.
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NUM 226
TIT THE CORUS DISTRIBUTED OPERATING SYSTEM:DESIGN AND IMPLEMENTATION
AUT M. GUILLEMONT
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR INST NAT DE RECHERCHE EN INFOMAT ET E AUTOMATIQUE , FRANCE
DET
KAP

ABS CHORUS IS AN ARCHITECTURE FOR DISTRIBUTED SYSTEMS. IT INCLUDES A
ABS METHOD OF DESIGNING A DISTRIBUTED APPLICATION, A STRUCTURE FOR
ABS ITS EXECUTION AND THE (OPERATING) SYSTEM TO SUPPORT THIS EXECUTION.
ABS ONE IMPORTANT CHARACTERISTIC OF CHORUS IS THAT THE MAJOR PART OF
ABS THE SYSTEM IS BUILT WITH THE SAME ARCHITECTURE AS APPLICATIONS. IN
ABS PARTICULAR, THE EXCHANGE OF MESSAGES, WHICH IN FUNDAMENTAL
ABS COMMUNICATION/SYNCHRONIZATION MECHANISM, HAS BEEN EXTENDED TO THE
ABS MOST BASIC FUNCTIONS OF THE SYSTEMS.
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NUM 227
TIT DESIGN OF A NETW OS FOR DISTRIBUTED DOUBLE-LOOP COMP NETW (DDCLN)
AUT M.T. LIU, D.P. TSAY, R.C. LIAN
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR DEPT OF COMP AND INFORM SCIENCE,OHIO STATE UNIV , COLUMBUS, OHIO
DET
KAP

ABS THE FTAMEWORK OF A MODEL OF A NETW OS (NOS) FOR USE IN DISTRIBUTED
ABS SYSTEMS IN GENERAL AND FOR USE IN THE DISTRIBUTED DOUBLE-LOOP
ABS COMPUTER NETW (DDLCN) IN PARTICULAR. AN INTEGRATED APPROACH IS
ABS TAKEN TO DESIGN THE NOS MODEL AND PROTOCOL STRUCTURE. IT IS BASED
ABS ON THE OBJECT MODEL AND NOVEL "TASK" CONCEPT, USING MESSAGE PASSING
ABS AS AN UNDERLYING SEMANTIC STRUCTURE. A LAYERED PROTOCOL IS PROVIDED
ABS FOR THE DISTRIBUTED SYSTEM KERNEL TO SUPPORT NOS. THE PROTOCOL
ABS STRUCTURE IS FIRST PRESENTED. THE NOS MODEL AS WELL AS THE NOTION
ABS OF TASK IS NEXT DESCRIBED. A TWO-LEVEL PROCESS INTERACTION MODEL IS
ABS DISCUSSED. AN INTEGRATED NAMING/PROTECTION SCHEME BASED UPON THE
ABS CAPABILITY AND SMALL ACCESS DOMAIN IS DETAILED. FINALLY, THE
ABS SYNCHRONIZATION TEMPLATE AND MESSAGE PASSING ARE PROPOSED TO RESOLV
ABS DISTRIBUTED SYNCHRONIZATION PROBLEMS.
ABS
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NUM 228
TIT MOVING A SERVICE FROM A LONG-HAUL TO A LAN
AUT P. BUCCIARELLI, G. ENRICO
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR OTECO OLIVETTI TELECOMM ,IVREA ITALY
DET
KAP

ABS THE PROBLEMS IN DESIGNING A NETW UTILITY INDEPENDANT FROM THE
ABS DEGREE OF DISPERSION OF THE INTERCONNECTED HOSTS. AS AN EXAMPLE
ABS WE CONSIDER A PARTICULAR APPLICATION A DISTRIBUTED FILE SYSTEM
ABS THAT HAS BEEN DESIGNED WITH CRITERIA OF MUDULARITY IN ORDER TO FIT
ABS THE REQUIREMENT OF DIFFERENT DISTRIBUTED ARCHITECT. THE UTILITY HAS
ABS ALREADY BEEN IMPLEMENTED ON A GEOGRAPHIC NETW. WE POINT OUT THE
ABS PROBLEMS THAT ARISE WHEN MOVING THE UTILITY TO OUR LAN AND WE
ABS FOCUS ON THE NEED FOR A STANDARD COMPATIBLE APPROACH TO COMM SERV
ABS FOR BOTH LOCAL AND GEOGRAPH NETW.
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NUM 229
TIT A HIGH PERFORMANCE GATEWAY FOR THE LOC CONNEC OF CAMBRIDGE RINGS
AUT I.M. LESLIE
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR COMP LABOR UNIV OF CAMBRIDGE , CAMBRIDGE
DET
KAP

ABS WHEN CONNECTION TOGETHER NETW WHICH HAVE RADICALLY DIFFERENT
ABS CHARATERISTICS, PROBLEMS CENTRE AROUND ADDRESSING, ROUTING AND
ABS PROTOCOL ISSUES. THESE PROBLEMS ARE AOMEWHAT REDUCED WHEN LINKING
ABS HOMOGENEOUS NETW TOGETHER. HOWEVER, IN ORDER TO PERSERVE THE LAN
ABS PROPERIES OF, FOR EXAMPLE, A MULTIPLE RING SYSTEM, THE GATEWAY
ABS DESIGNER IS FACED WITH STRINGENT PERFORMANCE REQUIREMENTS. A
ABS STRATEGY FOR INTERCONNECTING CAMBRIDGE RINGS IN THE SAME LOCAL
ABS ENVIRONMENT BY HIGH PERFORMANCE GATEWAYS WILL BE PRESENTED. HIGH
ABS BANDWIDTH AND LOW DELAYS THROUGH GATEWAYS ARE ACHIEVED IN THIS
ABS SCHEME. THE STRATEGY ALSO PERSEVES THE LAN PROTOCOLS USED ON THE
ABS RING OF CAMBRIDGE, SO THAT COMMUNICATION THROUGH A GATEWAY IS AS
ABS SIMPLE AS COMMUNICATION OVER A SINGLE RING.
ABS
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NUM 229
TIT DANUBE LAN INTECONNECTIONS VIA TRANSPAC PUBLIC NETW
AUT ANSART, BLOCH, SEGHAIER, MARTIN, MERCIER LAURANT
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR PROJECTS RHIN ET KAYAK, AGENCE DE L'INFORM, PARIS LA DEFENSE,FRANCE
DET
KAP

ABS THIS DEALS WITH PROBLEMS CONCERNING THE CONNECTION OF LAN ACROSS
ABS PUBLIC DATA NETW USING GATEWAYS ; IN PARTICULAR WHEN THE GATEWAY
ABS ALLOWS THE LAN TO BE SEEN FROM OUTSIDE AS AN OPEN SYSTEM. IT IS
ABS SHOWN HOW A GATEWAY PROVIDING A RELAY AT THE TRANSPORT LEVEL
ABS (DANUBE LAN TRANSP STATION TOWARDS RHIN TRANSP STATION), WICH
ABS ALLOWS DANUBE NETW EQUIPED SITE TO BE INTERCONNECTED WITH ANY OPEN
ABS SYSTEMS WHICH IS ACAILABLE ON THE FRENCH TRANSPAC PUBLIC DATA NETW.
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NUM 230
TIT NETWORK INTERCONNECTION
AUT A.A.S. DANTHINE
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR UNIVERSITE DE LIEGE , LIEGE, BELGIUM
DET
KAP

ABS USING AN EXTENDED OSI MODEL, AN ATTEMPT IS MADE TO UNIFY THE
ABS REPRESENTATION OF PUBLIC LONG-HAUL AND PRIVATE LOC NETWS.
ABS LOC NETW WIT SEPARATE ADDRESS DOMAINS ARE VERY LIKELY TO BE MET
ABS IN BROAD SITE NETW AND AN INTERNET SUBLAYER APPEARS TO BE THE
ABS MOST NATURAL WAY TO ACHIEVE THE INTERCONNECTION. SUCH AN INTERNET
ABS SUBLAYER WILL BE ALSO NECESSARY FOR BUILDING CORPORATE NETW BY THE
ABS INTERCONNECTION OF BROAD SITE NETW. SUCH AN INTERCONNECTION MAY
ABS USE X.25, LEASED LINES OR SATELLITE CHANNELS DEPENDING UPON THE
ABS REQUIREMENT IN DATA RATE. THE X.25 ACCESS WILL ALSO BE MANDATORY
ABS FOR ACCESSING SPECIAL SERVICES AND TELEX PROTOCOL IA AN INTERESTING
ABS PUBLIC SERVICE TO EXCHANGE INFORMATION BETWEEN NON-COMPATIBLE
ABS CORPORATE NETWORKS.
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NUM 231
TIT ON THE NAMING AND BINDING OF NETW DESTINATIONS
AUT J.H. SALTZER
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR M.I.T. LABORATORY FOR COMP SCIENCE , CAMBRIDGE USA
DET
KAP

ABS THIS OFFERS A PERSPECTIVE ON THE SUBJECT OF NAMES OF
ABS DESTINATIONS IN DATA COMMUNICATION NETW. IT SUGGESTS 2 IDEAS:
ABS FIRST, IT IS HELPFUL TO DISTINGUISH AMONG 4 DIFFERENT KINDS OF
ABS OBJECTS THAT MAY BE NAMED AS THE DESTINATION OF A PACKET IN A
ABS NETW. SECOND, THE OPERATING SYSTEM CONCEPT OF BINDING IS A USEFUL
ABS WAY TO DESCRIBE THE RELATIONS AMOING THE 4 KINDS OF OBJECTS. TO
ABS ILLUSTRATE THE USEFULNESS OF THIS APPROACH , THE PAPER INTERPRETS
ABS SOME MORE SUBTLE AND CONFUSING PROPERTIES OF TWO REAL-WORLD
ABS NETW SYSTEMS FOR NAMING DESTINATIONS.
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NUM 232
TIT CONNECTION-ORIENTED PROTOCOLS OF NET/ONE
AUT J.M. DAVIDSON
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR UNGERMANN BASS, INC. , SANTA CLARA
DET
KAP

ABS THIS PAPER DESCRIBES THE "CONNECTION-ORIENTED" PROTOCOLS OF NET/ONE
ABS THEY ARE THOSE WHICH PROVIDE THE SERVICES DESCRIBED TO THE TRANSPOR
ABS LAYER OF THE ISO OPEN SYSTEMS INTERCONNECTION(OSI) ARCHITECTURE--
ABS THE LAYER WHICH PROVIDES RELIABLE AND ORDERLY DELIVERY OF DATA
ABS BETWEEN TWO NETW ENTITIES ON A CONNECTION-ORIENTED BASIS. THERE ARE
ABS 4 SUCH PROTOCOLS. 3 ARE USED TO CREATE, DESTROY, AND ASK QUESTIONS
ABS
ABS ESTABLISHED CONNECTION. THE PAPER PRESENTS A SECTION ON THE NIU
ABS ARCHITECTURE TO ESTABLISH SOME CONTEXT, A SECTION ON THE UNDERLYING
ABS DATAGRAM FORWARDING MECHANISM ON WHICH THE FIRST THREE CONNECTION-
ABS ORIENTED PROTOCOLS DEPEND, AND THEN A SECTION ON EACH OF THE FOUR
ABS PROTOCOLS THEMSELVES.
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NUM 232
TIT AN EFFIC ERR DETECT MECHANISM FOR A MULTICAST TRANS SERV OF DANUBE
AUT DECITRE, ESTUBLIER, KHIDER, ROUSSET DE PINA, VLATTON
QUE PROC IFIP ON LAN , FLORENCE
KEY CSMA/CD NETWORKS- BROADCAST- MULTICAST- ERROR DETECTION- TRANSPORT
KEY CONTROL
KEY
DAT 1982
FIR CENTRE DE RECHERCH CII-HONEYWELL-BULL,GRENOBLE,LABOR IMAG, GRENOBLE
DET
KAP

ABS AN ERROR DETECTION MECHANISM PROVIDES A NEW WAY OF DETECTING ERRORS
ABS IN THE TRANSMISSION OF MESSAGES FROM SEVERAL SOURCES TO SEVERAL
ABS DESTINATIONS. IT HAS BEEN DESIGNED TO BE USED AT THE TRANSPORT STAT
ABS LEVEL TO IMPLEMENT A RELIABLE MULTICAST SERVICE. THE MAIN IDEA IS
ABS TO USE THE MUTUAL EXCLUSION PROVIDED BY THE TRANSMISSION MEDIUM TO
ABS CREATE A NUMBERING SYSTEM WHICH ALLOWS ERROR DETECTION WITHOUT
ABS SENDING POSITIVE ACHNOWLEDGEMENTS. THIS TECHNIQUE CAN BE APPLIED
ABS TO BROADCAST NETW SUCH HAS CSMA/CD WHICH HAS HW MUTUAL EXCLUSION
ABS MECHANISM PROVIDED BY THE CONTENTION ALGORITHM.
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NUM 233
TIT DEF AND DEVELOP OF A PROTOCOL FOR AN INDUST PLANT CONTR NETW
AUT W. ANSALDI, M. OLOBARDI, A.M. TRAVERSO
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR ANSALDO S.P.A. GENOVA, ITALY
DET
KAP

ABS A RICH SET OF REQUIREMENTS AND CONSTRAINTS WAS THE PREMISE FOR THE
ABS APPLICATION DESCRIBED IN THIS PAPER. IT WAS NEEDED TO PROVIDE MEANS
ABS OF CONNECTING DIFFERENT KINDS OF EQUIPMENT, IN ORDER TO BUILD AN
ABS INTEGRATED SYSTEM FOR INSTRUMENTATION, MEASUREMENT AND AUTOMATION
ABS FOR INDUSTRIAL PROCESS CONTROL ENVIRONMENT. THE LAN WE ENDEAVOURED
ABS TO DESIGN, REQUIRED PROMPT TRANSMISSION ERROR DETECION AND RECOVERY
ABS PROCEDURES, MAXIMUM DELAY CONSTRAINTS OBSERVANCE,AND THE CAPABILITY
ABS OF MONITORING AND DYNAMICALLY RECONFIGURING THE WHOLE SYSTEM. THE
ABS SOLUTION PROPOSED IS A COMMUNICATION PATH CONSISTING OF A PAIR OF
ABS COAXIAL CABLES; THE ACCESS POLICY TO THESE BEEING GOVERNED,FOR EACH
ABS KIND OF EQUIPMENT, BY A MICROPROCESSOR BASED INTERFACE.
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NUM 234
TIT VALIDATION OF A TOKEN-RING PROTOCOL
AUT H. RUDIN
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR IBM ZURICH RESEARCH LABORATORY, RUSCHLIKON, SWITZERLAND
DET
KAP

ABS THE "TOKEN-RING" TRANSMISSION SUBSYSTEM OF THE LOCAL-AREA COMMUNIC
ABS NETW BEEING ARCHITECTURED AND IMPLEMENTED HAS BEEN SUCCESSFULLY
ABS VALIDATED. THE MODEL OF THE TOKEN RING PROTOCOL USED FOR THE
ABS VALIDATION, THE SYSTEM USED TO VALIDATE THIS MODEL, THE VAROUS
ABS ERROR CONDITIONS USED TO STRESS THE PROTOCOL, AND THE RESULTS OF
ABS THE VALIDATION ARE DESCRIBED IN THIS REPORT.
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NUM 235
TIT METHODOLOGY FOR ASSESS THE ROBUST OF A LAN BASED COMP SYST
AUT N.B. MEISNER
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR UNGERMANN BASS INC, ONE BURLINGTON WOODS DRIVE, BURLINGTON USA
DET
KAP

ABS THIS PAPER USES A SPECIFIC EXAMPLE OF A LARGE MULTI-COMPUTER
ABS SYST SUPPORTED BY A LAN TO EXAMINE A METHODOLOGY FOR EVALUATION
ABS THE ROBUSTNESS OF A DISTRIBUTED SYST. ROBUSTNESS IS EVALUATED
ABS IN TERMS OF AVAILABILITY. TWO ARCHITECTURES ARE EXPLORED, A
ABS HIERARCHICAL MODEL AND A PLANAR MODEL. IN THE HIERARCHICAL MODEL
ABS USERS COMMUNICATE TO THE HIGHER LEVEL HOSTS VIA INTERMEDIATE LEVEL
ABS MICROCOMPUTERS. THE PLANAR ARCHITECTURE HAS ALL MACHINES ON THE
ABS SAME LEVEL, UNIVERSALLY SERVING THE USER'S NEED.
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NUM 236
TIT A LAN FOR PERFORMANCE MEASUREMENT OF LOCALLY DISTRIBUTED SW
AUT E.E. BALKOVICH, A. SOCEANU
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR DEPT OF COMP SCIENC UNIV OF CONNECTICAT STORRS, USA; UNI REGENSBURG
DET
KAP

ABS AN EXPERIMENTAL DISTRIBUTED COMP SYST WAS DEVELOPED TO STUDY THESE
ABS ASPECTS OF DISTRIBUTED SYST PERFORMANCE. THIS SYST IS ORGANIZED AS
ABS A LAN OF MICROCOMPUTERS. THE PRIMARY DESIGN OBJECTIVE WAS TO
ABS PRODUCE A SYST THAT COULD BE USED TO OBSERVE THE BEHAVIOR OF
ABS DISTRIBUTED SW STRUCTURES. THE REMAINING SECTIONS DESCRIBE THE HW
ABS AND SW FEATURES OF THIS NETW AND HOW THEY CAN BE USED TO OBSERVE
ABS THE EXECUTION OF LOGICALLY DISTRIBUTED SW.
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NUM 237
TIT PERFORM EVALUATION OF CSMA/CD CHANNEL ACCESS PROT IN COMMON-CHANN
AUT N. SHACHAN, V.B. HUNT
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR SRI INTERNATIONAL, MENLO PARK
DET
KAP

ABS A PROPABILISTIC MODEL FOR THE 1-PERSISTENT CSMA/CD CHANNEL ACCESS
ABS PROTOCOL SIMILIAR TO THE ONE USED BY THE STANDARD ETHERNET IS
ABS DEVELOPED, AND THE THROUGHPUT-DELAY CHARACTERISTICS OF THE PROTOCOL
ABS IS PRESENTED. PERFORMANCE GRAPHS ILLUSTRATING THESE CHARACTERISTICS
ABS WITH PARAMETERS IN THE RANGE APPLICABLE TO THE PROPOSED ETHERNET
ABS STANDARD ARE EXTRACTED FROM THE GENERAL PERFORMANCE CURVES. A NEW
ABS PHENOMENON APPLICABLE TO HEAVY TRAFFIC CONDITIONS IS PREDICTED. IN
ABS THAT REGION THE MODEL PREDICTS THE EXISTENCE OF A CHANNEL-CAPTURE
ABS EFFECT,WHERE A SINGLE STATION CAN HOLD THE CHANNEL FOR LONG PERIODS
ABS OF TIME WHILE OTHERS TRY UNSUCCESSFULLY TO GAIN ACCESS. TO VERIFY
ABS THE CAPTURE EFFECT PREDICTED BY THE EXACT MODEL, A SIMPLIFIED MODEL
ABS IS DEVELOPED WHICH ILLUSTRATES THE CAPTURE PHENOMENON.
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NUM 238
TIT THEORET PERFORM ANALYSIS OF POLLING AND CARRIER SENSE OF COLL DETEC
AUT E. ARTHURS, B.W. STUCK
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR BELL LABORATORIES MURRAY HILL, NEW JERSEY
DET
KAP

ABS THIS WORK IS MOTIVATED BY 2 APPLICATION AREAS OF COMMUNIC NETW
ABS CONNECTING COMPUTERS AND TERMINALS OVER A GEOGRAPHIC REGION OF
ABS SEVERAL KILOMETERS DIAMETER OR LESS, SO CALLED LAN: A SET OF
ABS TERMINALS, PROCESSORS, AND SECONDARY STORAGE DEVICES ARE CONNECTED
ABS BY A HIGH SPEED COMMUNIC LINK. HOW MANY TERMINALS, PROCESSOR, AND
ABS SECONDARY STORAGE DEVOCES CAN THE SYST SUPPORT AND STILL MEET
ABS TRAFFIC HANDLING GOALS? MULTIPLE PROCESSORS ARE CONNECTED TOGETHER
ABS BY A HIGH SPEED COMMUNICATION LINK. HOW MANY PROCESSORS CAN THE
ABS LINK HANDLE TO MEET PERFORMANCE CRITERIA?A MATHEMATICAL ABSTRACTION
ABS OF MODEL OF SUCH A SITUATION IS DEALT WITH HERE.
ABS
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NUM 239
TIT PERFORM PREDICTION OF A FLOW CONTR SYST USING AN ANALYTIC MODEL
AUT P.G. HARRISON
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR DEPT OF COMPUTING, IMPERIAL COLLEGE, LONDON, ENGLAND
DET
KAP

ABS A MARKOW MODEL OF A MESSAGE PROCESSING NODE WITH BATCH ARRIVALS,
ABS WINDOW SIZE CONSTRAINTS AND AN ADDITIONAL FLOW CONTROL BASED OM
ABS ALLOCATION OF CREDITS IS PRESENTED. THE MODEL IS SUFFICIENTLY
ABS GENERAL FOR MODELLING MANY NODES WHICH REPRESENT SERVERS OR SUB-
ABS SYST IN ANY QUEUING NETW WITH CONGESTION CONTROLS. ITS PRINCIPAL
ABS APPLICATION IS THE REPRESENTATION OF NETW-INDEPENDENT FLOW CONTROL
ABS OF MESSAGE BETWEEN NETW WHICH MAY HAVE QUITE DIFFERENT MESSAGE
ABS SIZES AND PROTOCOLS: A "GATEWAY".MODEL STRUCTURE IS MUCH SIMPLIFIED
ABS BY ALTERNATIVE REPRESENTATION OF CERTAIN NODE CHARACTERISTICS AND
ABS DIRECT SOLUTION OF THE BALANCE EQUATIONS BECOMES PRACTICABLE.
ABS VALIDATION IS BY COMPARISON WITH SIMULATION TESTS.
ABS
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NUM 240
TIT THROUGHPUT DELAY ANALYS OF NON SLOTT AND NON PERSIST CSMA-CD PROT
AUT T. VO-DAI
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR DEPART D'INFORMATIQUE, UNIVERSITE LAVAL,QUEBEC, CANADA
DET
KAP

ABS A THROUGHPUT-DELAY ANALYSIS OF THE NON SLOTTED AND NON PERSISTENT
ABS CSMA-CD PROTOCOL. AN EXPRESSION FOR CHANNEL THROUGHPUT AS FUNCTION
ABS OF CHANNEL OFFERED TRAFFIC IS OBTAINED AND ITS BEHAVIOUR IS STUDIED
ABS THE RETRANSMISSION PROCESS IS ANALYSED AND AN OPTIMAL COLLISION
ABS CONTROL ALGORITHM IS OBTAINED. AN ANALYTICAL EXPRESSION FOR AVERAGE
ABS TRANSMISSION DELAY IS DERIVED. NUMERICAL RESULTS SHOW THE CSMA-CD
ABS PROTOCOL IS APPROPRIATE FOR LAN IN TERMS OF CHANNEL CAPACITY,
ABS TRANSMISSION DELAY AND CHANNEL STABILITY.
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NUM 241
TIT PERFORMANCE ANALYSIS OF LOOP COMPUTER NETWORKS
AUT G.A. BABIC
QUE PROC IFIP ON LAN , FLORENCE
KEY
KEY
KEY
DAT 1982
FIR INST FOR COMP AND INFORMATION SYS IRIS-ENERGOINVEST,SARAJEVO,YUGOSL
DET
KAP

ABS IN THIS PAPER, WE DEVELOP A NEW APPROCH TO ANALYZING LOOP COMP
ABS NETW. IT IS SIMPLE AND GENERAL, AND CAN BE EFFICIENTLY USED TO
ABS ANALYZE A SYMMETRIC OR ASYMMETRIC LOOP COMP NETW HAVING ANY
ABS NUMBER OF HOSTS AND USING ANY TRANSMISSION MECHANISM(DLCN, NEW-
ABS HALL OR PIERCE). WE ILLUSTRATE OUR APPROACH BY ANALYZING THE LOOP
ABS COMPUTER NETW TO SUPPORT TRANSACTION PROCESSING AGAINST A DISTRI-
ABS BUTED DATA BASE AND ANALYTICAL EXPRESSIONS FOR CALCULATING
ABS DIFFERENT NETW PARAMETERS ARE DERIVED. ALSO, WE DESCRIBE CORRES-
ABS PONDING SIMULATION MODELS ARE COMPARED AND AGREEMENT BETWEEN THESE
ABS RESULTS IS REASONABLE AND FOR SOME PARAMETERS VERY GOOD.
ABS
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NUM 242
TIT SOME ARCHITECTURAL AND SYSTEM IMPLICATIONS OF LOCAL COMPUTER NETWOR
AUT A.FRANCK; P.C. PATTON
QUE LOCAL COMPUTER NETWORKS - TUTORIAL; PP. 306-314
KEY BUS STRUCTURE - RING - HYPERCHANNEL - IDANET - NCAR - CDC - CYBER
KEY IBM - PDP11 - CRAY 1 - MODCOMP - SEL
KEY
DAT 1979
FIR UNIVERSITY OF MINNESOTA
DET ---
KAP

ABS THE CONCEPT OF LOCAL COMPUTER NETWORK (LCN) HAS BEEN RECEIVING GREATER
ABS ATTENTION DURING THE PAST FEW YEARS. THIS PAPER WILL DISCUSS THE CURRENT
ABS APPROACHES BEEING TAKEN TO DEVELOP A LOCAL COMPUTER NETW VIA THE APPROACH
ABS DESCRIBED AS A BUS STRUCTURE BY THURBER AND FREEMAN IN THEIR PAPER (PP.
ABS 4-14 OF SAME SOURCE).
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NUM 243
TIT A HIGH BANDWIDTH LOCAL COMPUTER NETWORK
AUT EDWARD SZURKOWSKI
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 300-305)
KEY BUS STRUCTURE - VIRTUAL CHANNEL - P BUS - REMOTE START - PDP11 - REAL TIME
KEY
KEY
DAT 1978
FIR UNIVERSITY OF DELAWARE
DET P BUS HARDWARE
KAP

ABS AN APPLICATION ENVIRONMENT IN WHICH IT IS DESIRED TO SUPPORT DATA
ABS ACQUISITION AND OTHER LABORATORY TASKS WITHIN THE FRAMEWORK OF AN EXISTING
ABS TIME-SHARING SYSTEM IS DESCRIBED. THE DESIRABLE CHARACTERISTICS FOR A
ABS COMMUNICATION SYSTEM TO SUPPORT REAL-TIME ACTIVITIES ON AUXILIARY
ABS PROCESSORS CONNECTED TO THE CENTRAL SYSTEM ARE DEVELOPED. WHILE DATA
ABS ACQUISITION IS THE MOTIVATION FOR NETWORKING EFFORT, IT IS SHOWN THAT THE
ABS GENERALIZATION OF THE REQUIREMENTS WILL SPECIFY A FACILITY OF MUCH GREATER
ABS UTILITY AND INTEREST. A BUS ARCHITECTURE IS SHOWN TO HAVE SEVERAL
ABS DESIRABLE PROPERTIES FOR THIS APPLICATION AND THE DESIGN OF HARDWARE FOR
ABS ITS IMPLEMENTATION IS DISCUSSED.
ABS
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NUM 244
TIT BACK END NETWORK APPROACHES
AUT JAMES E. THORNTON
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 292-299)
KEY SHARED DATA BASE - COMMON DATA BASE - SHARED STORAGE - REMOTE CHANNNELS
KEY HYPERCHANNEL - OCTOPUS - SKYLAB - IBM - CDC - PDP10 - REMOTE DEVICE HANDLING
KEY BUS STRUCTURE - BACK END NETWORK - SPERRY UNIVAC
DAT 02.80
FIR NETWORK SYSTEMS CORPORATION
DET ---
KAP

ABS A PARTICULARLR INTERESTING EVOLUTIONARY PHASE OF COMPUTER SCIENCE AND
ABS TECHNOLOGY LIES BEHIND THE TERM "BACK END STORAGE NETWORKS". TWO WELL
ABS DOCUMENTED EFFORTS REPRESENTING SIGNIFICANT EARLY WORK ON BACK END
ABS NETWORKS WILL BE DISCUSSED. IN THE EARLIER WORK, BEGUN IN 1964 AT LAWRENCE
ABS LIVERMORE LABORATORY, THE BACK END WAS A SUBNETWORK OF LLL'S HIGH
ABS PERFORMANCE LOCAL COMPUTER NETWORK, OCTOPUS. THE SECOND SYSTEM, BUILT BY
ABS NASA FOR THE MISSION CONTROL CENTER IN HOUSTON, TEXAS, WAS INTENDED TO
ABS SUPPORT SKYLAB AND THE MANY EXPERIMENTS THAT REQUIRED GROUND PROCESSING.
ABS WHILE THE TWO GENERAL APPROACHES TO LOCAL COMPUTER NETWORKS THAT HAVE BEEN
ABS EXPLORED IN RECENT YEARS -THE RING NETWORK AND THE BUS NETWORK- ARE
ABS DIFFERENTIATED ONLY BY THE METHOD OF INTERCONNECTION , THE FOLLOWING
ABS DESCRIPTION OF NEW SYSTEM'S ARCHITECTURE CONCENTRATES ON THE BUS STRUCTURE
ABS AND REFERENCES HYPERCHANNEL, A BUS NETWORK DEVELOPED BY NETWORK SYSTEMS
ABS CORPORATION.
ABS

NUM 245
TIT ACKNOWLEDGING ETHERNET
AUT MARIO TOKORO, KIICHIRO TAMARU
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 285-290)
KEY ETHERNET - PACKET SWITCHING - MULTIPROCESSING - DISTRIBUTED PROCESSING
KEY BROADCAST COMMUNICATION - DISTRIBUTED CONTROL
KEY
DAT 1977
FIR KEIO UNIVERSITY, YOKOHAMA, JAPAN
DET PERFORMANCE SIMULATION
KAP

ABS A MODIFIED ETHERNET NAMED 'ACKNOWLEDGING ETHERNET' WHICH ESSENTIALLY
ABS PROVIDES HIGHER RELIABILITY IS PROPOSED HEREIN AND ITS PERFORMANCE IS
ABS EVALUATED VIA SIMULATION. THE EVALUATION RESULTS SHOW THE ADVANTAGES OF
ABS ACKNOWLEDGING ETHERNET OVER ORIGINAL ETHERNET IN BOTH RESPONSE TIME AND
ABS EFFECTIVE TRANSMISSION RATE. COMPARING THE OVERALL PERFORMANCE OF
ABS ACKNOWLEDGING ETHERNET TO ETHERNET, THE MODIFIED VERSION APPEARS TO BE A
ABS DEFINITE IMPROVEMENT.
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NUM 246
TIT RINGNET: A PACKET SWITCHED LOCAL NETWORK WITH DISTRIBUTED CONTROL
AUT R.L. GORDON, W.W. FARR, P.LEVINE
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 278-284)
KEY DISTRIBUTED CONTROL - PACKET SWITCHING - CONTROL TOKEN - UNIDIRECTIONAL LOOP
KEY PRIMENET - X.25 - HOMOGENEOUS - RINGNET - VIRTUAL CIRCUIT
KEY
DAT 1979
FIR PRIME COMPUTER INC. FRAMINGHAM, MASS.
DET SOFTWARE ARCHITECTURE - X.25
KAP

ABS RINGNET IS A COMMERCIALLY AVAILABLE 8MHZ PACKET SWITCHED COMMUNICATION
ABS SYSTEM DESIGNED TO CONNECT HOSTS IN THE SAME BUILDING, USUALLY LESS THAN
ABS SEVERAL HUNDRED FEET APART, ALTHOUGH IT CAN ALSO BE USED FOR LOOSELY
ABS COUPLED MULTIPROCESSOR SYSTEMS. CONTROL OF THE NETWORK IS COMPLETELY
ABS DECENTRALIZED AND DEPENDS ONLY ON A CIRCULATING TOKEN FOR ARBITRATION OF
ABS THE COMMUNICATION MEDIUM. THIS PAPER DESCRIBES THE HARDWARE AND SOFTWARE
ABS ARCHITECTURE OF THE NETWORK AND DISCUSSES SOME OF THE DESIGN PRINCIPLES
ABS USED IN ITS IMPLEMENTATION.
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NUM 247
TIT A MICROPROCESSOR-BASED LOCAL NETWORK NODE
AUT R.J. CARPENTER, J.SOKOL JR, R. ROSENTHAL
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 272-277)
KEY DISTRIBUTED CONTROL - ETHERNET - BROADCAST COMMUNICATION - PACKET SWITCHING
KEY ALOHA - TIE - VIRTUAL CIRCUIT
KEY
DAT 1978
FIR NATIONAL BUREAU OF STANDARDS, WASHINGTON
DET TERMINAL INTERFACE EQUIPMENT (TIE)
KAP

ABS ALONG WITH THE GROWTH AND DEVELOPMENT OF NATIONAL AND INTERNATIONAL
ABS COMPUTER NETWORKS, THERE HAS BEEN A MORE RECENT PARALLEL GROWTH IN THE
ABS FIELD OF LOCAL AREA NETWORKS. BACKGROUND IS GIVEN ON A TIME DIVISION
ABS MULTIPLE ACCESS CABLE LOCAL NETWORK WITH ADAPTIVE RESOURCE ALLOCATION
ABS TROUGH A FULLY CONTENTION-TYPE CONTROL SYSTEM. DETAILS ARE GIVEN ON THE
ABS MICROPROCESSOR-BASED NODE WHICH ALLOWS A WIDE VARIETY OF TERMINALS,
ABS MICROPROCESSORS, MINICOMPUTERS, AND LARGER MAINFRAMES ON ONE CAMPUS OR IN
ABS A BUILDING COMPLEX TO BE FULLY INTERCONNECTED BY A COMMON COAXIAL CABLE.
ABS THE NODE OR TERMINAL INTERFACE EQUIPMENT (TIE) IS PARTITIONED TO ALLOW
ABS EFFICIENT MODULAR EXPANSION FOR SINGLE OR MULTIPLE USER NETWORK
ABS CONNECTION. PROVISION IS MADE FOR DATA ENCRYPTION WHERE REQUIRED.
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NUM 248
TIT ETHERNET: DISTRIBUTED PACKET SWITCHING FOR LOCAL COMPUTER NETWORKS
AUT R.M. METCALFE, D.R. BOGGS
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 262-271)
KEY PACKET SWITCHING - MULTIPROCESSING - DISTRIBUTED CONTROL
KEY BROADCAST COMMUNICATION - STATISTICAL ARBRITRATION - ALOHA - TDM - CSMA/CD
KEY DISTRIBUTED COMPUTING - EFTP
DAT 05.75
FIR XEROX PALO ALTO RESEARCH CENTER
DET ETHERNET SPECIFICATION, DESIGN, EFTP
KAP

ABS ETHERNET IS A BRANCHING BROADCAST COMMUNICATION SYSTEM FOR CARRYING
ABS DIGITAL DATA PACKETS AMONG LOCALLY DISTRIBUTED COMPUTING STATIONS. THE
ABS PACKET TRANSPORT MECHANISM PROVIDED BY ETHERNET HAS BEEN USED TO BUILD
ABS SYSTEMS WHICH CAN BE VIEWED AS EITHER LOCAL COMPUTER NETWORKS OR LOOSELY
ABS COUPLED MULTIPROCESSORS. AN ETHERNET'S SHARED COMMUNICATION FACILITY, ITS
ABS ETHER, IS A PASSIVE BROADCAST MEDIUM WITH NO CENTRAL CONTROL. COORDINATION
ABS OF ACCESS TO THE ETHER FOR PACKET BROADCASTS IS DISTRIBUTED AMONG THE
ABS CONTENDING TRANSMISSION STATIONS USING STATISTICAL ARBITRATION. SWITCHING
ABS OF PACKETS TO THEIR DESTINATION ON THE ETHER IS DISTRIBUTED AMONG THE
ABS RECEIVING STATIONS USING PACKET ADDRESS RECOGNITION. DESIGN PRINCIPLES AND
ABS IMPLEMENTATION ARE DESCRIBED, BASED ON EXPERIENCE WITH AN OPERATING
ABS ETHERNET OF 100 NODES ALONG A KILOMETER OF COAXIAL CABLE. A MODEL FOR
ABS ESTIMATING PERFORMANCE UNDER HEAVY LOADS AND A PACKET PROTOCOL FOR ERROR
ABS CONTROLLED COMMUNICATION ARE INCLUDED FOR COMPLETENESS.
ABS

NUM 249
TIT ALOHA PACKET BROADCASTING - A RETROSPECT
AUT R. BINDER, N. ABRAMSON, F. KUO, A. OKINAKA, D. WAX
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 249-261)
KEY PACKET SWITCHING - BROADCAST - MENEHUNE - ARPANET - ALOHANET - INTELSAT 4
KEY ATS1 - PACNET - TCU - PCU - IBM
KEY
DAT 1975
FIR UNIVERSITY OF HAWAII, HONOLULU, HAWAII
DET DESIGN PRINCIPLES, IMPLEMENTATION, EXPERIENCE
KAP

ABS IN THIS PAPER WE CONCENTRATE ON THOSE CHARACTERISTICS WHICH ARE OF
ABS INTEREST FOR A LOCAL DISTRIBUTION DATA NETWORK. IN PARTICULAR, WE DISCUSS
ABS THE LESSONS LEARNED IN THE DESIGN AND IMPLEMENTATION OF THE ALOHANET, A
ABS PACKET BROADCASTING RADIO NETWORK IN OPERATION AT THE UNIVERSITY OF HAWAII
ABS SINCE 1970. A NUMBER OF DESIGN ISSUES WHICH AROSE IN THE CONSTRUCTION OF
ABS THE SYSTEM ARE DEFINED, OUR SOLUTIONS ARE EXPLAINED, AND IN SOME CASES
ABS THEY ARE JUSTIFIED. THE LESSONS LEARNED FROM THE ALOHANET ARE USED TO
ABS INDICATE HOW SUCH A RADIO PACKET BROADCASTING SYSTEM MIGHT BEST BE BUILT
ABS USING THE TECHNOLOGY AVAILABLE IN 1975.
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NUM 250
TIT THE ARGONNE INTRA-LABORATORY NETWORK
AUT W.P. LIDINSKY
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 236-248)
KEY PACKET TRANSMISSION - DISTRIBUTED INTELLIGENCE - RANDOM TOPOLOGY
KEY TASK COMMUNICATION - DECNET NSP - SWIFTE - IBM - PDP11 - VARIAN
KEY MULTIPROCESSING
DAT 1976
FIR ARGONNE NATIONAL LABORATORY, ILLINOIS
DET ---
KAP

ABS A SUBSTANTIAL NEED EXISTS AT ARGONNE NATIONAL LABORATORY FOR A COMPUTER
ABS NETWORK WITHIN THE LABORATORY WHICH IS CAPABLE OF PROVIDING HIGH SPEED
ABS ERROR FREE INFORMATION TRANSFER. AS PRESENTLY CONCEIVED, THE NETWORK
ABS UNDER DEVELOPMENT WILL PROVIDE A HIGH SPEED TRANSMISSION CAPABILITY
ABS BETWEEN USER NODES LOCATED THROUGHOUT THE LABORATORY. IN ADDITION TO THESE
ABS USER NODES, TWO SERVER NODES ARE PLANNED: ONE TO THE CENTRAL COMPUTING
ABS FACILITY VIA A MULTICOMPUTER CCF FRONT-END SYSTEM AND ONE TO A CENTRAL
ABS FILE SYSTEM. THE NETWORK IS BEING IMPLEMENTED AS A PACKET TRANSMISSION,
ABS DISTRIBUTED CONTROL SYSTEM CAPABLE OF SUPPORTING RANDOM TOPOLOGY. PRIMARY
ABS EMPHASIS WILL BE ON TASK COMMUNICATION BETWEEN DIFFERENT HOSTS. HOST TASK
ABS TO NETWORK PROTOCOLS ARE BEING KEPT SIMPLE IN ORDER TO MINIMIZE IMPACT ON
ABS THE USER. LINKS OF THE NETWORK WILL CONSIST OF DEDICATED LABORATORY OWNED
ABS WIRE, RADIO, AND INFRARED CARRIER FACILITIES.
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NUM 251
TIT HARWELL
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NUM 252
TIT A NETWORK-ORIENTED MULTIPROCESSOR FRONT-END
AUT W.F. MANN, S.M. ORNSTEIN, M.F. KRALEY
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 222-229)
KEY FRONT-END - PLURIBUS - TENEX - TELNET - PDP10 - PDP11 - IMP - TIP
KEY ARPANET
KEY
DAT 1976
FIR BOLT BERANEK & NEWMAN, CAMBRIDGE, MASS.
DET HARDWARE, SOFTWARE DECISIONS AND DESIGN
KAP

ABS THE AUTHORS DISCUSS THE DESIGN OF A LARGE-SCALE FRONT-END COMPUTER IN
ABS TERMS OF SYSTEM REQUIREMENTS, AVAILABLE TECHNOLOGY, AND THE AUTHOR'S
ABS EXPERIENCE WITH ARPANET. THE DESIGN IS CONTRASTED WITH THAT OF THE ARPANET
ABS TIP. ISSUES DISCUSSED INCLUDE THE CHOICE OF HARDWARE CONFIGURATION (CPU
ABS REQUIREMENTS, RELIABILITY, MODULARITY, TERMINAL INTERFACE UNITS), WHAT
ABS FACILITIES TO PROVIDE IN THE FRONT-END AND HOST, FLOW CONTROL ON VARIOUS
ABS INTER-COMPUTER DATA PATHS, AND DATA BUFFERING STRATEGIES. THE RESULTING
ABS SYSTEM IS BEING INSTALLED AT THE RESEARCH COMPUTER CENTER AT BOLT BERANEK
ABS AND NEWMAN INC.
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NUM 253
TIT AN OVERVIEW OF THE DISTRIBUTED COMPUTER NETWORK
AUT DAVID L. MILLS
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 196-203)
KEY RESOURCE SHARING - DISTRIBUTED PROCESSING - VIRTUAL FILE SYSTEM
KEY AUTOMATIC ROUTING - DCN - DCS - PDP11 - RSX11 - UNIX - RSEXEC - DOS - VOS
KEY INTERPROCESS COMMUNICATION - BOS
DAT 1976
FIR UNIVERSITY OF MARYLAND, COLLEGE PARK, MARYLAND
DET SOFTWARE CONCEPTS
KAP

ABS THE DISTRIBUTED COMPUTER NETWORK (DCN) IS A RESOURCE-SHARING COMPUTER
ABS NETWORK WHICH INCLUDES A NUMBER OF DEC PDP11 COMPUTERS. THE DCN SUPPORTS A
ABS NUMBER OF PROCESSES IN A MULTIPROGRAMMED VIRTUAL ENVIRONMENT. PROCESSES
ABS CAN COMMUNICATE WITH EACH OTHER AND INTERFACE WITH THIS ENVIRONMENT IN A
ABS MANNER WHICH INDEPENDENT OF THEIR RESIDENCE WITHIN A PARTICULAR COMPUTER.
ABS RESOURCES SUCH AS PROCESSORS, DEVICES AND STORAGE MEDIA CAN BE REMOTELY
ABS ACCESSED AND SHARED SO AS TO PROVIDE INCREASED RELIABILITY, FLEXIBILITY
ABS AND SYSTEM UTILIZATION.
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NUM 254
TIT A HIERARCHICAL NETWORK
AUT R.L. ASHENHURST, R.H.VONDEROHE
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 210-214)
KEY HIERARCHICAL NETWORK - FRONT-END - REMOTE CONCENTRATOR - MISS - MOM
KEY IBM - PDP11 - PDP8 - NOVA820
KEY
DAT 02.75
FIR UNIVERSITY OF CHICAGO
DET ---
KAP

ABS THE MINICOMPUTER INTERFACING SUPPORT SYSTEM (MISS) ORGANIZES ITS COMPUTING
ABS FACILITIES INTO A HIERARCHICAL ARRANGEMENT. MINICOMPUTERS PERFORMING
ABS APPLICATION- PROCESSING TASKS ARE CONNECTED TO CENTRALIZED FACILITIES THAT
ABS PROVIDE OPERATIONAL AND DEVELOPMENTAL SUPPORT AS NEEDED. MEDIUM SPEED
ABS (9600-BPS) COMMUNICATION LINES ARE USED BETWEEN THE FIRST TWO LEVELS OF
ABS THE HIERARCHY, WHILE HIGH SPEED (50-KBPS) LINES ARE USED BETWEEN THE
ABS SECOND AND THIRD LEVELS. IN THIS KIND OF NETWORK, THE LOWEST LEVEL MINIS
ABS CAN ACT AS IF THEY HAVE EXTENSIVE SETS OF PERIPHERALS AND VERY
ABS SOPHISTICATED OPERATING SYSTEMS. THEY ACTUALLY HAVE ACCESS TO LARGER
ABS MACHINES OR OTHER NETWORKS.
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NUM 255
TIT FIBERNET: MULTIMODE OPTICAL FIBERS FOR LOCAL COMPUTER NETWORKS
AUT E.G. RAWSON, R.M. METCALFE
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 61-68)
KEY ETHERNET - FIBER - STAR COUPLER - PASSIVE TRANSMISSIVE STAR NETWORK
KEY PACKET SWITCHING - FIBER EFFICIENCY - PACKET COMMUNICATION
KEY
DAT 12.77
FIR XEROX PALO ALTO RESEARCH CENTER
DET FIBER ELECTRONICS, EFFICIENCY, PERFORMANCE, RELIABILITY
KAP

ABS LOCAL COMPUTER NERWORKS WHICH COMMUNICATE OVER COPPER CONDUCTORS HAVE BEEN
ABS DEVELOPED BOTH TO PROMOTE RESOURCE SHARING AND PROVIDE INCREASED
ABS PERFORMANCE. SUCH NETWORKS TYPICALLY OPERATE AT BANDWIDTHLENGTH PRODUCTS
ABS (BW*L) UP TO A FEW MHZ*KM. IN THIS PAPER WE CONSIDER THE USE OF
ABS * FIBER OPTICS IN SUCH NETWORKS, AND GIVE A STATUS REPORT ON A STAR-
ABS CONFIGURED FIBER OPTIC NETWORK EXPERIMENT CALLED FIBERNET WHICH OPERATES
ABS AT A BWL PRODUCT OF ABOUT 100MHZ*KM AT A * DATA RATE OF
ABS 150 MBITS/S AND WHICH IN ITS FINAL PHASES WILL CONNECT UP TO 19 STATIONS.
ABS WE COMPARE THE MERITS AND PROBLEMS OF LINEAR, RING AND SEVERAL STAR
ABS CONFIGURATIONS, AND OF ACTIVE VS. PASSIVE NETWORKS. THE PACKET
ABS COMMUNICATION PROTOCOL IS DISCUSSED AND NETWORK EFFICIENCY IS CALCULATED
ABS AS A FUNCTION OF THE PACKET LENGTH,CHANNEL CAPACITY AND NETWORK
ABS PROPAGATION TIME. WE DESCRIBE THE SYSTEM PERFORMANCE OF THE PRESENT
ABS FIBERNET EXPERIMENT, WHICH USES A 19-PORT TRANSMISSIVE STAR COUPLER,
ABS GAALAS INJECTION LASERS AND AVALANCHE PHOTODIODES.

NUM 256
TIT A HOMOGENEOUS NETWORK FOR DATA-SHARING COMMUNICATIONS
AUT E.G.MANNING, R.W.PEEBLES
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP.69-82)
KEY ARPANET - MININET - MESSAGE SWITCHING - TRANSACTION PROCESSING
KEY DISTRIBUTED DATA BASES - PDP11 - UNIX - DISTRIBUTED PROCESSING
KEY HOMOGENEOUS NETWORK - INTERPROCESS COMMUNICATION
DAT 05.77
FIR UNIVERSITY OF WATERLOO, WATERLOO, ONTARIO, CANADA
DET MININET: CONCEPTS, DESIGN FEATURES AND IMPLEMENTATION
KAP

ABS THE COMMUNICATIONS ASPECTS OF A DISTRIBUTED ARCHITECTURE FOR TRANSACTION
ABS PROCESSING ARE DESCRIBED. THE ARCHITECTURE IS AIMED AT TRANSACTION
ABS PROCESSING ON PHYSICALLY DISTRIBUTED DATA BASES, WHERE MOST OF THE HITS ON
ABS A GIVEN COMPONENT OF THE DATA BASE COME FROM A SINGLE GEOGRAPHIC REGION.
ABS THE ARCHITECTURE IS PHYSICALLY BASED ON A HOMOGENEOUS SET OF HOST
ABS MINICOMPUTERS, A MESSAGE- SWITCHED COMMUNICATIONS SUBNETWORK (LOOP OR
ABS PACKET-SWITCHED), AND A SET OF NETWORK INTERFACE PROCESSORS WHICH CONNECT
ABS THE HOSTS TO THE COMMUNICATIONS SUBNETWORK. IT IS LOGICALLY BASED ON TWO
ABS PRIMITIVES; ALL DATA OBJECTS ARE SEGMENTS AND ALL CONTROL OBJECTS ARE
ABS TASKS. EACH TASK RUNS IN A PRIVATE VIRTUAL SPACE AND ALL INTERTASK-
ABS COMMUNICATION IS DONE BY PASSING MESSAGE SEGMENTS. SEGMENT PASSING IS
ABS DONE BY A SINGLE MESSAGE SWITCHING TASK IN EACH HOST, ASSISTED BY THE
ABS INTERFACE PROCESSORS AND COMMUNICATIONS SUBNETWORK WHERE NECESSARY. THE
ABS MESSAGE SWITCHING TASK ALSO ENFORCES PROTECTION RULES WITHOUT THE NEED FOR
ABS SPECIAL HARDWARE.

NUM 257
TIT DATAKIT - AMODULAR NETWORK FOR SYNCHRONOUS AND ASYNCHRONOUS TRAFFIC
AUT A.G. FRASER
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 83-85)
KEY DATAKIT - PACKET SWITCH - VIRTUAL CIRCUIT - HDLC
KEY
KEY
DAT 06.79
FIR BELL LABORATORIES, MURRAY HILL, NEW JERSEY
DET ---
KAP

ABS A SET OF MUTUALLY COMPATIBLE MODULES ARE THE ELEMENTS OF AN EXPERIMENTAL
ABS DATA NETWORK. CALLED DATAKIT, THE CONCEPT BEING STUDIED IS AN "ERECTOR
ABS SET" APPROACH TO THE CONSTRUCTION OF DATA NETWORKS THAT CAN GROW
ABS GRACEFULLY AND EVOLVE TO ACCOMMODATE A WIDE VARIETY OF TRAFFIC TYPES. THE
ABS MODULES, EACH A SINGLE CIRCUIT BOARD, ARE INTERCONNECTED BY A HARDWARE
ABS PACKET SWITCH. THE NETWORK IS MASTER CLOCKED SO THAT SPEED CONTROL CAN BE
ABS USED FOR STREAM TRAFFIC WHILE ASYNCHRONOUS MULTIPLEXING CAN BE USED FOR
ABS BURSTY DATA.
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NUM 258
TIT ARCHITECTURE CONSIDERATIONS FOR LOCAL COMPUTER NETWORKS
AUT K.J. THURBER,H.A.FREEMAN
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP.4-15)
KEY TAXONOMY - CLASSIFICATION - PACKET SWITCH - CIRCUIT SWITCH - TOPOLOGY
KEY BUS - RING - I/O CHANNELS - COMMUNICATION BOUND - I/O OR MEMORY BOUND
KEY
DAT 10.81
FIR SPERRY UNIVAC, ST. PAUL, MINNESOTA
DET ---
KAP

ABS THIS PAPER TREATS LOCAL COMPUTER NETWORK ARCHITECTURES, A RAPIDLY
ABS DEVELOPING AREA OF INTEREST AND ACTIVITY IN THE COMPUTER FIELD. PRESENTED
ABS ARE A DEFINITION OF LCN'S A TAXONOMY OF LCN ARCHITECTURES ALONG WITH
ABS CURRENTLY IDENTIFIED SYSTEMS FROM EACH CATEGORY, A DISCUSSION OF IMPORTANT
ABS DESIGN AND OPERATIONAL ISSUES, AND ARCHITECTURE SUMMARIES OF ONE EXAMPLE
ABS SYSTEM FROM EACH ARCHITECTURE CLASS.
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NUM 259
TIT AN INTRODUCTION TO LOCAL AREA NETWORKS
AUT D.D. CLARK, K.T. POGRAN, D.P. REED
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 16-36)
KEY DAISY CHAIN - CONTROL TOKEN - MESSAGE SLOTS - REGISTER INSERTION - TOPOLOGY
KEY RELIABILITY - TRANSMISSION MEDIA - DATA FLOW - PROTOCOLS - VIRTUAL CIRCUIT
KEY BROADCAST - DATAGRAM - GATEWAY - SUBNETWORK CONCEPT - MESSAGE EXCHANGE
DAT 06.78
FIR MIT, CAMBRIDGE, MASS.
DET MIT - UCI - LNI
KAP

ABS THERE ARE TWO BASIC ISSUES IN LOCAL AREA NETWORK DESIGN. FIRST, HOW SHOULD
ABS THE HARDWARE REALIZING THE NETWORK BE ORGANIZED TO PROVIDE RELIABLE HIGH-
ABS SPEED COMMUNICATION AT MINIMUM COST? WITH THE LOW COST OF THE RAW
ABS TRANSMISSION CAPABILITY, CARE IS REQUIRED TO KEEP THE ASSOCIATED HARDWARE
ABS COSTS CORRESPONDINGLY LOW. SECOND, WHAT PROTOCOLS SHOULD BE USED FOR THE
ABS OPERATION OF THE NETWORK? WHILE MANY PROTOCOL PROBLEMS ARE COMMON TO LOCAL
ABS AREA NETWORKS AND LONG-HAUL NETWORKS SUCH AS THE ARPANET, NEW PROTOCOLS
ABS ARE REQUIRED TO EXPLOIT THE EXTENDED CAPABILITIES OF LOCAL AREA NETWORKS.
ABS THIS PAPER ADDRESSES THESE TWO BASIC ISSUES. IT ALSO CONSIDERS THE
ABS INTERCONNECTION OF LOCAL AREA NETWORKS AND LONG-HAUL NETWORKS AND PRESENTS
ABS A CASE STUDY WHICH DESCRIBES IN DETAIL THE HOST COMPUTER INTERFACE
ABS HARDWARE REQUIRED FOR A TYPICAL LOCAL AREA NETWORK.
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NUM 260
TIT THE EPIC-DPS: A DISTRIBUTED NETWORK EXPERIMENT
AUT D.R. ANDERSON
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 178-184)
KEY DISTRIBUTED PROCESSING - RESOURCE SHARING - NETWORK MASS STORE
KEY RING - BUS - UNIVAC - INTERPROCESSOR BUFFER CHANNEL
KEY MEMORY MULTIPLEX DATA LINK
DAT 09.75
FIR SPERRY UNIVAC DEFENSE SYSTEMS DIVISION, ST. PAUL, MINNESOTA
DET ---
KAP

ABS COMPUTER NETWORKS ARE BEING DEMONSTRATED AS COST-EFFECTIVE APPROACHES TO
ABS PROVIDING USERS WITH COMPUTING SERVICES. LOCALIZED NETWORKS OF
ABS MINICOMPUTERS EMPLOYING THE PRINCIPLES OF LARGE-SCALE NETWORKS ARE AN
ABS ALTERNATIVE SYSTEM ARCHITECTURE TO CONVENTIONAL SYSTEMS HARDWARE. AN
ABS EXPERIMENTAL SYSTEM HAS BEEN BUILT IN THE SPERRY UNIVAC SYSTEMS LABORATORY
ABS TO DEVELOP AND EVALUATE SYSTEM ARCHITECTURAL PRINCIPLES AND ALTERNATIVES
ABS FOR FUTURE NETWORK SYSTEM ARCHITECTURES. THIS SYSTEM, THE EPIC DISTRIBUTED
ABS PROCESSING SYSTEM (DPS), FEATURES VIRTUAL NETWORK ADDRESSING, HIGH SPEED
ABS INTERPROCESSOR COMMUNICATIONS CHANNELS,ALTERABLE-REPERTOIRE
ABS MICROPROGRAMMED PROCESSORS, AND SERIALIZED SYSTEM MEMORY BUSSING. THIS
ABS PAPER DESCRIBES THE THE SYETEM COMPONENTS (THE EPIC COMPUTER, THE VIRTUAL
ABS ADDRESS TRANSLATOR, THE MEMORY MULTIPLEX DATA LINK,AND THE FUTURE NETWORK
ABS MASS STORE) AND THE NETWORK PROCESS CONTROL CONCEPTS OF KERNEL SOFTWARE.
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NUM 261
TIT THE PACIFIC NORTHWEST LABORATORY MINICOMPUTER NETWORK
AUT L.H. GERHARDSTEIN, J.O. SCHROEDER, A.J. BOLAND
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 164-177)
KEY BROADCAST COMMUNICATION - CSMA - GATEWAY - DISTRIBUTED PROCESSING
KEY BATNET - MESSAGE PROTOCOL - COMMUNICATION PROTOCOL - PDP11 - IAS
KEY RSX11 - RT11
DAT 1978
FIR BATELLE-NORTHWEST, RICHLAND, WASHINGTON
DET HARDWARE - SOFTWARE - PROTOCOLS
KAP

ABS BATELLE MEMORIAL INSTITUTE OPERATES THE PACIFIC NORTHWEST LABORATORY UNDER
ABS CONTRACT TO THE DEPARTMENT OF ENERGY. THE COMPUTER NETWORK BEING DEVELOPED
ABS AT PNL IS CALLED BATNET. BATNET EMPLOYS BROADCAST COMMUNICATION OVER A
ABS SHARED COMMUNICATION CHANNEL AND CARRIER-SENSE-MULTIPLE-ACCESS PROTOCOL.
ABS CCSMA PROTOCOL HAS BEEN IMPLEMENTED IN SOFTWARE. THE COMPUTER INTERFACES
ABS PERFORM NECESSARY CSMA LOGICAL FUNCTIONS SUCH AS BUSY DETECTION,COLLISION
ABS DETECTION, AND TIMING FOR RETRANSMISSION SCHEDULING. THE PRESENT BATNET
ABS CONFIGURATION HAS FIVE STATIONS, ALL PDP11'S. HOWEVER, IT CAN BE
ABS IMPLEMENTED FOR VIRTUALLY UNLIMITED STATIONS AND ON OTHER MANUFACTURER'S
ABS MINI/MICROCOMPUTERS. THE BATNET PROTOCOL CAN DE IMPLEMENTED ON ANY
ABS MINICOMPUTER WITH 8 OR 16 BIT INTEGER DATA MODES. LOW-LEVEL I/O HANDLERS
ABS SHOULD BE WRITTEN IN MACHINE DEPENDENT ASSEMBLY LANGUAGE OR IN HIGHER
ABS LEVEL SYSTEM LANGUAGES WHEN THEY ARE AVAILABLE. MOST HIGH LEVEL SYSTEM
ABS ROUTINES WILL BE WRITTEN IN SYSTEM INDEPENDENT FORTRAN IV TO MAINTAIN
ABS SOURCE PROGRAM TRANSPORTABILITY.

NUM 262
TIT A DISTRIBUTED DOUBLE LOOP COMPUTER NETWORK (DDLCN)
AUT J.J. WOLF, M.T. LIU
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 148-163)
KEY FAULT TOLERANCE - DISTRIBUTED PROCESSING - MESSAGE ROUTING - DDLCN
KEY NEWHALL LOOP - PIERCE LOOP - DLCN LOOP - SIMULATION
KEY
DAT 1978
FIR THE OHIO STATE UNIVERSITY
DET FAULT DETECTION AND RECOVERY - SIMULATION
KAP

ABS THIS PAPER PRESENTS THE CONCEPTUAL MODEL OF A DOUBLE-LOOP COMPUTER NETWORK
ABS FOR USE IN DISTRIBUTED PROCESSING. THE INTERFACE DESIGN IS UNIQUE IN THAT
ABS IT INCORPORATES TRI-STATE CONTROL LOGIC WHICH ENABLES THE NETWORK TO
ABS BECOME FAULT-TOLERANT IN INSTANCES OF LINK FAILURE BY DYNAMICALLY
ABS RECONFIGURING THE LOGICAL DIRECTION OF MESSAGE FLOW THROUGH ITS
ABS COMMUNICATION LINKS. THE MESSAGE ROUTING DECISION IS DISCUSSED AND SEVERAL
ABS POSSIBLE ALGORITHMS ARE EXAMINED. TWO DIFFERENT METHODS OF HANDLING SEVERE
ABS FAULT-PRESENT CONDITIONS ARE DESCRIBED AND COMPARED: A DISCUSSION OF
ABS NORMAL NETWORK OPERATION AS WELL AS RESTRUCTURED OPERATION IS ALSO GIVEN.
ABS SIMULATION RESULTS SHOW THAT THE DOUBLE-LOOP DESIGN PROVIDES SHORTER
ABS MESSAGE DELAYS THAN ANY SINGLE-LOOP DESIGN NOT ONLY DURING FAULT-FREE
ABS OPERATION, BUT ALSO UNDER VARIOUS FAULT CONDITIONS.
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NUM 263
TIT THE HONEYWELL EXPERIMENTAL DISTRIBUTED PROCESSOR
AUT E.D. JENSEN
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 137-147)
KEY DISTRIBUTED COMPUTER - DIRECT SHARED BUS - GLOBAL BUS
KEY VECTOR DRIVEN PROPORTIONAL ACCESS (VDPA) - HXDP - DECENTRALIZED CONTROL
KEY
DAT 01.78
FIR HONEYWELL SYSTEMS AND RESEARCH CENTER, MINNEAPOLIS, MN.
DET HXDP LOGICAL AND PHYSICAL STRUCTURE
KAP

ABS THE HONEYWELL EXPERIMENTAL DISTRIBUTED PROCESSOR (HXDP) IS A VEHICLE FOR
ABS RESEARCH IN THE SCIENCE AND ENGINEERING OF PROCESSOR INTERCONNECTION,
ABS EXECUTIVE CONTROL, AND USER SOFTWARE FOR A CERTAIN CLASS OF MULTIPLE-
ABS PROCESSOR COMPUTERS WHICH WE CALL "DISTRIBUTED COMPUTER" SYSTEMS. SUCH
ABS SYSTEMS ARE VERY UNCONVENTIONAL IN THAT THEY
ABS ACCOMPLISH TOTAL SYSTEM-WIDE EXECUTIVE CONTROL IN ABSENCE OF ANY
ABS CENTRALIZED PROCEDURE, DATA, OR HARDWARE. IN THIS PAPER WE DESCRIBE THE
ABS CLASS OF COMPUTER SYSTEMS OF INTEREST TO THE HXDP PROJECT, THE MOTIVATIONS
ABS OF OUR INTEREST, OUR RESEARCH APPROACH, THE INITIAL APPLICATION
ABS ENVIRONMENT, THE HXDP SYSTEM PHILOSOPHY AND THE HXDP HARDWARE FACILITIES
ABS AS SEEN BY THE EXECUTIVE PROGRAMMER.
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NUM 264
TIT A RING NETWORK
AUT D.J. FARBER
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 134-136)
KEY RING - BUS - DISTRIBUTED PROCESSING - DISTRIBUTED DATA MANAGEMENT
KEY DISTRIBUTED SYSTEM CONTROL - DCS - DCOS - PDP11 - LOCKHEED SUE - VARIAN 620
KEY MESSAGE SLOTS - LOAD BALANCING
DAT 02.75
FIR UNIVERSITY OF CALIFORNIA, IRVINE
DET ---
KAP

ABS DCS, DEVELOPED AT THE UNIVERSITY OF CALIFORNIA,IRVINE, IS A DISTRIBUTED
ABS COMPUTER SYSTEM IN THE CATEGORY OF BUS STRUCTURE. EVERY (MINI-) PROCESSOR
ABS IS CONTROLLED BY ITS OWN AUTONOMOUS OPERATING SYSTEM AND IS ATTACHED TO A
ABS SINGLE UNIDIRECTIONAL COMMUNICATION RING VIA A RING INTERFACE. THE RING
ABS CAN BE CONSIDERED A SERIES OF MESSAGE SLOTS, WITH MESSAGES ADDRESSED TO
ABS PROCESSES, NOT TO PROCESSORS. CONTROL IS COMPLETELY DISTRIBUTED, LOAD
ABS BALANCING IS CARRIED OUT IMPLICITLY IN THE DETERMINATION OF TASK
ABS SERVICING.
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NUM 265
TIT THE DISTRIBUTED DATA NETWORK, ITS ARCHITECTURE AND OPERATION
AUT J.F. SPRINGER
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 106-113)
KEY CIRCUIT SWITCH - MESSAGE SWITCHING - ROUTING MATRIX - ADDCP
KEY FEP - DDN - FRONT END PROCESSOR
KEY
DAT 1978
FIR RCA, GOVERNMENT COMMUNICATIONS SYSTEMS, CAMDEN, NEW JERSEY
DET CONCEPT, PRINCIPLES AND IMPLEMENTATION OF DDN
KAP

ABS THIS PAPER DESCRIBES THE DISTRIBUTED DATA NETWORK, ITS ARCHITECTURE AND
ABS USE. THE DISTRIBUTED DATA NETWORK (DDN) IS A HIGH PERFORMANCE, INTER-
ABS COMPUTER COMMUNICATIONS FACILITY. AN OVERVIEW IS PRESENTED HEREIN,
ABS DESCRIBING THE THE ARCHITECTURE AND OPERATION OF FRONT-END PROCESSOR,
ABS COMMUNICATION PROTOCOL AND MESSAGE SWITCHING SYSTEM. THE ARCHITECTURE
ABS DESCRIPTION ENCOMPASSES BOTH HARDWARE AND SOFTWARE AT ITS CONCEPTUAL,
ABS RATHER THAN DETAIL DESIGN LEVEL.
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NUM 266
TIT SOURCE ROUTING FOR CAMPUS-WIDE INTERNET TRANSPORT
AUT J. H. SALTZER ; D. P. REED ; D. D. CLARK
QUE PROC IFIP ON LAN , ZURICH S.1
KEY
KEY
KEY
DAT 08.80
FIR MASSACHUS. INSTITUTE OF TECHNOLOGY LABORATORY FOR COMPUTER SCIENCE
DET
KAP

ABS FOR THE INTERNET ADDRESSING LAYER OF A CAMPUS-WIDE LAN, A SOURCE
ABS ROUTING MECHANISM MAY HAVE SEVERAL ADVANTAGES OVER HOP-BY-HOP
ABS ROUTING SCHEMES BASED ON UNIVERSAL OR HIERARCHICAL TARGET
ABS ADDRESSES. THE CAMPUS ENVIRONMENT REQUIRES MANY SUBNETWORKS
ABS CONNECTED BY GATEWAYS, AND HAS RELATIVELY LOOSE ADMINISTRATION.
ABS THE PRIMARY ADVANTAGE OF SOURCE ROUTING IN THIS ENVIRONMENT IS
ABS SIMPLICITY OF IMPLEMENTATION OF THE GATEWAYS THAT INTERCONNECT
ABS SUBNETWORKS WITH CONSEQUENT IMPROVEMENT IN COST, MAINTENANCE
ABS EFFORT, RECOVERY TIME, EASE OF TROUBLE LOCATION, AND OVERALL
ABS MANAGEMENT EFFORT.
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NUM 267
TIT MESHED-STAR NETWORKS FOR LOCAL COMMUNICATION SYSTEMS
AUT E. H. ROTHAUSER ; P. A. JANSON ; H. R. MULLER
QUE PROC IFIP ON LAN , ZURICH S.25
KEY
KEY
KEY
DAT 08.80
FIR IBM ZURICH RESEARCH LABORATORY , RUSCHLIKON - SWITZERLAND
DET
KAP

ABS A MESHED LOCAL NETWORK BASED ON SIMPLE BUILDING BLOCKS. AS IN
ABS SOME RING OR BUS SYSTEMS, OCCASIONAL LOSS OF DATA BLOCKS MAY OCCUR
ABS AND NEEDS TO BE RECOVERED FROM BY THE ATTACHED END-STATIONS. THE
ABS PAPER DISCUSSES ADVANTAGES AND DISADVANTAGES OF SUCH A SYSTEM. KEY
ABS TO THE SYSTEM ARE STRIPPED-DOWN PACKET-SWITCHING NODES PERFORMING
ABS ONLY THE FUNCTION OF PACKET ROUTING WHICH CAN BE IMPLEMENTED BY A
ABS SIMPLE HARDWARE SWITCHING BUS. SUCH AN APPROACH ALLOWS INCREASING
ABS THE THROUGHPUT OF THE NODES BY ORDERS OF MAGNITUDE COMPARED TO
ABS CURRENT DESIGNS.
ABS A CRITICAL SUBSET OF THE PROPOSED SYSTEM IS CURRENTLY BEEING
ABS MODELED. MAJOR PARTS OF THIS MODEL ARE OPERATIONAL.
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NUM 268
TIT OPERATIONAL EXPERIENCE WITH THE NBS LOCAL AREA NETWORK
AUT R. J. CARPENTER ; J. E. MALCOLM ; M. L. STRAWBRIDGE
QUE PROC IFIP ON LAN , ZURICH S.43
KEY
KEY
KEY
DAT 08.80
FIR NATIONAL BUREAU OF STANDARDS WASHINGTON
DET
KAP

ABS (NBSNET) HAS BEEN IN ROUTINE USE SINCE OCTOBER 1979, AND NOW SERVES
ABS ABOUT 70 USER DEVICES IN 8 DIFFERENT BULDINGS. IT IS AN ETHERNET
ABS LIKE NET. THE CURRENT USER DEVICES ARE PRIMARILY
ABS GRAPHIC AND ALPHANUMERIC TERMINALS, WITH A SMALLER
ABS NUMBER OF MINI- AND MICROCIMPUTERS. BOTH TERMINAL ACCESS
ABS AND FILE TRANSFER PROTOCOLS HAVE BEEN IMPLEMENTED. MOST NODES KEEP
ABS TRAFFIC AND ERROR STATISTICS DURING EACH CONNECTION AND REPORT THE
ABS INFORMATION TO A CENTRAL LOGGING NODE WHEN THE CONNECTION
ABS TERMINATES. OUR EXPERIENCE TO DATE SHOWS THAT USERS ARE OFTEN
ABS STRONGLY GEOGRAPHICALLY CLUSTERED, THET THE LAST 15 METERS OF THE
ABS CONNECTION TO THE USER ARE THE MOST DIFFICULT AND EXPENSIVE, THAT
ABS A NETWORK MEASUREMENT SYSTEM IS REQUIRED TO IDENTIFY MARGINAL
ABS CONDITIONS IN THE NETWORK, AND THE NETWORKS OF THIS TYPE ARE
ABS RELIABLE. INFORAMTION ABOUT NETWORK FAILURES AND INSTALLATION
ABS COSTS IS PRESENTED.

NUM 269
TIT A MULTI-STAR BROADCAST NETWORK FOR LOCAL AREA COMMUNICATION
AUT F. CLOSS ; R. P. LEE
QUE PROC IFIP ON LAN , ZURICH S.61
KEY
KEY
KEY
DAT 08.80
FIR IBM RESEARCH LABORATORY SAN JOSE - CALIFORNIA
DET
KAP

ABS A STAR NODE FOR BUILDING SINGLE OR MULTIPLE STAR NETWORKS WAS
ABS PRESENTED. NODE SIMPLICITY IS ACHIEVED BY USING A PACKET BROAD-
ABS CASTING PROTOCOL. THE STAR NODE SIMPLY RELAYS A PACKET RECEIVED
ABS FROM ONE STATION TO ALL STATIONS WITHOUT BUFFERING AND SWITCHING.
ABS THE NODE CONTROLS ACCESS TO THE ENSEMBLE OF NODE-TO-STATION LINKS
ABS WHICH REPRESENTS THE BROADCAST CHANNEL. NO COLLIDED OR TRUNCATED
ABS PACKETS APPEAR ON THAT CHANNEL. A ROOTED TREE NETWORK CAN BE BUILT
ABS FROM SEVERAL IDENTICAL STAR NODES. SOME ACTIVE ELEMENTS LIKE
ABS TRANSMITTERS/RECEIVERS AND VERY FEW LOGIC CIRCUITS WERE NEEDED
ABS INSIDE A NODE. NODES CONTAIN SIMPLE HARDWARE MONITORS FOR NODE AND
ABS LINK SUPERVISION. AUTOMATIC FAULT ISOLATION PREVENTS TOTAL
ABS BREAKDOWN OF THE NETWORK.
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NUM 270
TIT OPERATION EXP WITH A CAMBRIGE RING LAN IN A UNIVERSITY ENVIRONMENT
AUT E.B. SPRATT
QUE PROC IFIP ON LAN , ZURICH S.81
KEY
KEY
KEY
DAT 08.80
FIR COMPUTING LABORATORY , UNIVERSITY OF KENT , CANTERBURY , ENGLAND
DET
KAP

ABS THE KING RING PROJECT HAS NOW BEEN UNDERWAY FOR SOME TWO YEARS.
ABS PROGRESS HAS BEEN MOST ENCOURAGING AND HAS LED TO A FULL OPERATION
ABS RING-BASED LAN, WHICH IS THE BASIS OF SERVICES FOR A COMMUNITY OF
ABS 1300 USERS. OUR WORK HAS DEMONSTRATED THAT A STANDARD CAMBRIDGE
ABS RING IS CLEARLY CAPABLE OF MEETING 2 OF OUR MAJOR OBJECTIVES,
ABS FIRSTLY TO SET UP A RELIABLE AND RESILIENT SERVICE AND SECONDLY
ABS THAT A LAN CAN OFFER AN EFFECTIVE MEANS OF DEALING WITH AN EVOLVING
ABS SITUATION, WITH THE CAPABILITY TO BRING IN NEW EQUIPMENT, AND
ABS PHASE-OUT OLD EQUIPMENT IN A SANITARY MANNER. - 2.THE CURENT
ABS POSITION - THREE VIEWPOINTS - 2.1 A CONSOLE USER - 2.2 RESEARCH
ABS PROJECTS - 2.3 OPERATIONS AND MANAGEMENT - 3. DEVELOPMENTS 1978-80
ABS - A) HW -B) PROTOCOLS - C) SOFTWARE TOOLS - D) SW - E) THE PILOT
ABS SERVICE AND TRANSITIONAL ISSUES - 4. FUTURE DEVELOPMENTS
ABS
ABS

NUM 271
TIT UNIVERSITY COLLEGE LONDON ACTIVITIES WITH THE CAMBRIDGE RING
AUT P. T. KIRSTEIN ; S.R. WILBUR
QUE PROC IFIP ON LAN , ZURICH S.107
KEY
KEY
KEY
DAT 08.80
FIR DEPARTMENT OF COMPUTER SCIENCE UNIVERSITY COLLEGE LONDON
DET
KAP

ABS THIS DISCUSSES THE HARDWARE BEING DEVELOPED AT UCL TO BUILD
ABS COMPONENTS OF THE CAMBRIDGE RING TECHNOLOGY, AND TO CONNECT A
ABS LIMITED NUMBER OF TYPES OF COMPUTERS TO THE RING. THE APPLICATIONS
ABS BEING DEVELOPED, AND THE SOFTWARE DESIGN CHOICES TO BE MADE ARE
ABS DISCUSSSED.THE REASONS FOR CHOOSING THE RING TECHNOLOGY, AND OUR
ABS EXPERIENCES WITH IT ARE CONSIDERED. FINALLY A SNAPSHOT IS GIVEN OF
ABS THE STATUS OF THE PROJECT AT THE MIDDLE OF AUGUST 1980.
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NUM 272
TIT SUPPORT AND GROWTH OF A MANUFACTURING ENGENEERING COAX COMP NETW
AUT R.C.PATTON
QUE PROC OF 6TH CONFERENCE ON LAN , MINNESOTA
KEY
KEY
KEY
DAT 10.81
FIR IBM INFORMATION SYST DIVISION , ROCHESTER, MINNESOTA
DET
KAP

ABS A LAN IS GENERALLY OPTIMIZED TO PERFORM A DEFINED FUNCTION USING A
ABS GIVEN SET OF HW AND PROGRAMMING COMPONENTS. THE CHALLENGE TO THE
ABS IMPLEMENTERS IS TO PROVIDE A NETW TO SOLVE THE PROBLEMS FOR WHICH
ABS THE NETW WAS DESIGNED, AND ALLOW THE NETW TO EXPAND TO SOLVE FUTURE
ABS PROBLEMS. EQUALLY IMPORTANT TO THE NETW DESIGN IS THE UNDERSTANDING
ABS AND SUPPORT PROVIDED BY MANAGEMENT WHICH ALLOWS THE NETW TO EXIST
ABS AND EXPAND. THE IBM HAS HAD A COAXIAL COMP NETW IN OPERATION SINCE
ABS 1970. THE NETW CONSISTED OF AN IBM SYST/370 MODEL 40 HOST SYST
ABS SUPPORTING A NETW OF 15 1130 SATELLITE COMP.TODAY THE NETW CONSISTS
ABS OF 2 IM SYST/370 MODEL 158 HOST SYST WITH A NETW OF 350 SATELLITE
ABS COMPUTERS. THIS PAPER EXAMINES THE MANAGEMENT PRACTICES THAT ALLOWE
ABS THIS LAN TO EXIST AND TO EXPAND ITS SCOPE.
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NUM 273
TIT U.S. MILITARY ACADEMY COMPUTER LAN (CLAN)
AUT R.L. LEECH, J.R. MONASTRA
QUE PROC OF 6TH CONFERENCE ON LAN , MINNESOTA
KEY
KEY
KEY
DAT 10.81
FIR U.S. MILITARY ACADEMY
DET
KAP

ABS THE U.S. MILITARY ACADEMY HAS INITIATED A RESEARCH PROJECT FOR A
ABS PROTOTYPE COMPUTER LAN. THE NETW HW SELECTED FOR THE BASIS OF THE
ABS USMACLAN WAS UNGERMANN BASS'S NET/ONE.
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NUM 274
TIT ADVANCED AIRBORNE EXECUTIVE
AUT C.S. CZAPLICKI
QUE PROC OF 6TH CONFERENCE ON LAN , MINNESOTA
KEY
KEY
KEY
DAT 10.81
FIR SW & COMP DIRECTORATE NAVAL AIR DEVELOPMENT CENTER, WARMINSTER
DET
KAP

ABS THE MAIN OBJECTIVE OF THIS PROGRAM WAS TO POSTULATE, IMPLEMENT AND
ABS TEST A DISTRIBUTED EXECUTIVE DESIGN WHICH WOULD MEET THE REQUIRE-
ABS MENTS OF VARIOUS AVIONICS DISTRIBUTED PROCESSING CONFIGURATIONS.
ABS FUTURE PROJECT REQUIREMENTS HAVE BEEN REVIEWED AND A DISTRIBUTED
ABS PROCESSING ARCHITECTURE WHICH BEST MEETS THE NEAR-TERM FUTURE
ABS NAVY AVIONIC REQUIREMENTS HAS BEEN SELECTED. THE GOAL WAS A
ABS GENERAL PORPOSE EXECUTIVE PROGRAM WHICH WOULD PROVIDE INCREASED
ABS RELIABILITY, GRACEFUL DEGRADATION AND EXPANDED PROCESSING CAPABILI-
ABS TY WHILE PROVIDING FLEXIBILITY IN ARCHITECTURAL DESIGN OF THE CON-
ABS FIGURATION OF COMPUTERS AND PROCESSING FUNCTIONS WITHIN A SYSTEM.
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NUM 275
TIT ARBITER FOR A LAN WITH BUS STRUCTURE
AUT G. DE SILVA ARROZ
QUE PROC OF 6TH CONFERENCE ON LAN , MINNESOTA
KEY
KEY
KEY
DAT 10.81
FIR INSTITUTO SUPERIOR TECNICO, CAPS, LISBOA, PORTUGAL
DET
KAP

ABS INTERBUS A LAN WHICH IS BEING BUILT AT THE CAPS, IS BRIEFLY DES-
ABS CRIBED. THE COMMUNIC SUPPORT OF THE NETW IS A GLOBAL BUS WITH
ABS CENTRALIZED SELECTION ACCESS CONTROL. A SYNCHRONOUS ARBITER
ABS IS DESCRIBED WHICH RULES THE ACCESS TO THE BUS. THE POTENTIAL
ABS HIGH NUMBER OF CONNECTED DEVICES AND THE POWERFULL AND FLEXIBLE
ABS PRIORITY SCHEME WHICH IS DYNAMICALLY ALTERABLE WITHOUT SUSPENDING
ABS THE DEVICE OPERATION,ALONG WITH ITS MODULAR STRUCTURE AND RELATIVE-
ABS LY HIGH SPEED ARE ITS MOST INTERESTING FEATURES.
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NUM 276
TIT DEFINITION AND ANALYSIS OF A NEW SHORTEST-DELAY PROTOCOL
AUT L. LI ; H.D. HUGHES
QUE PROC OF 6TH CONFERENCE ON LAN , MINNESOTA
KEY
KEY
KEY
DAT 10.81
FIR DEPARTMENT OF COMPUTER SCIENCE, MICHIGAN STATE UNIVERSITY
DET
KAP

ABS AN ACCESS LEVEL PROTOCOL FOR LAN IS DEFINED AND ANALYZED. THIS
ABS PROTOCOL EMPLOYS A SCHEME WHICH IS ANALOGOUS TO THE ONE-DIRECT-
ABS IONAL SHORTEST-SEEK-TIME-FIRST (SCAN) ALGORITHM ADVANCED BY
ABS DENNING AT AL (6,7,9), AND IS REFERRED TO AS THE SHORTEST DELAY
ABS ACCESS METHOD (SDAM). SDAM IS ENTIRELY NEW, AND IT WILL BE SHOWN
ABS HOW IT CAN SIGNIFICANTLY REDUCE THE TRANSMISSIONS FROM DIFERENT
ABS NODES ON A BUS NETW. THE PERFORMANCE OF SDAM WILL BE DETERMINED
ABS BY BOTH ANALYTIC AND SIMULATION MODELS, AND COMPARED TO THAT OF
ABS WELL-KNOWN PROTOCOLS (E.G. CSMA, MSAP, CSMA/CD, M/D/1 --
ABS PERFECT SCHEDULING).
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NUM 277
TIT AUTHENTICATION PROTOCOLS OF GENERAL COMMUNICATION CHANNELS
AUT D.P. SIDHU
QUE PROC OF 6TH CONFERENCE ON LAN , MINNESOTA
KEY
KEY
KEY
DAT 10.81
FIR BROOKHAVEN NATIONAL LABORATORY , UPTON, NEW YORK
DET
KAP

ABS AUTHENTICATIOM PROTOCOLS USING CONVENTIONAL AND PUBLIC-KEY ENCRYP-
ABS TION SCHEMES ARE DISCUSSED FOR AUTHENTICATION OF USERS OR SYSTEMS
ABS IN A COMPUTER NETW ENVIRONMENT FOR THE CASE WHEN THE COMMUNIC
ABS CHANNEL CAN, IN GENERAL, REORDER MESSAGES, I.E., FIFO AND NON-FIFO
ABS CHANNELS. ALSO DISCUSSED ARE SEVERAL PROPERTIES OF THESE PROTOCOLS
ABS WHICH INCLUDE COMPLETENESS, DEADLOCK FREENESS, LIVELOCK OR TEMPO-
ABS BLOCKING FREENESS, TERMINATION, LIVENESS AND ABSENCE OF NON-EXECU-
ABS TABLE INTERACTIONS. THIS PAPER EXTENDS THE RESULT OF OUR 2 PRE-
ABS VIOUS PAPERS WHICH DISCUSSES SIMILAR AUTHENTICATION PROTOCOLS
ABS BUT FOR FIFO CHANNELS ONLY.
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NUM 278
TIT A LINK LEVEL PROTOCOL AND ITS FIRMWARE IN A RING NETWORK
AUT M. ISHIZAKA, S. NAKATSUKA, T. KAKUNO, T. ICHIHASHI
QUE PROC OF 6TH CONFERENCE ON LAN , MINNESOTA
KEY
KEY
KEY
DAT 10.81
FIR COMPUTER LABORATORY, MITSUBISHI ELECTRIC CORPORATION
DET
KAP

ABS WE HAVE DEVELOPED RING NETW (LOOP-3) WHICH PERFORMS THE DATA LINK
ABS LEVEL PROTOCOL BY FIRMWARE AND REALIZES A HIGH SPEED COMMUNIC
ABS SYST. THE FIRMWARE IS IMPLEMENTED IN THE RING BUS PROCESSOR (RBP).
ABS RBP IS A SPECIAL PROCESSOR FOR A HIGH SPEED COMMUNIC AND DIRECTLY
ABS CONNECTED TO AN I/O CHANNEL OF COMP. RESPONDING TO THE COMMUNIC
ABS REQUESTS OF APPLICATION PROCESS IN THE COMPUTER, RBP CAN CONNECT
ABS OR DISCONNECT UP TO 96 DATA LINKS TO PERFORM DIRECT DATA TRANSFER
ABS BETWEEN THEIR BUFFERS BY MEANS OF SYNCHRONOUS OPERATION. AN ESTI-
ABS MATION OF COMMUNIC PERFORMANCE BY SIMULATION IS ALSO DISCUSSED.
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NUM 279
TIT RNS: A MEDIUM SPEED, LOW COST, LAN
AUT R.A. BERGERON, J. L. POLOSKI, R. D. RUSSEL
QUE PROC OF 6TH CONFERENCE ON LAN , MINNESOTA
KEY
KEY
KEY
DAT 10.81
FIR HENDRIX ELECTRON, MANCHASTER, UNI OF NH., DURHAM
DET
KAP

ABS THIS DESCRIBES A RADIAL NETWORKING SYST (RNS) FOR INTERCONNECTING
ABS LOC COMP AT DATA RATES UP TO 50 KILOBYTES PER SECOND. THE SYST
ABS TAKES ADVANTAGE OF LOW COST BUT POWERFUL MICROPROCESSOR INTERFACE
ABS CHIPS TO REDUCE SYST COST. RESULTS OF A SYST SIMULATION ARE
ABS PRESENTED AS WELL AS ON-LINE RESULTS.
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NUM 280
TIT THE ANALYSIS OF A CONFLICT-FREE PROTOCOL BASED ON NODE CLUSTERS
AUT T.T. LIU, L. LI, W.R. FRANTA
QUE PROC OF 6TH CONFERENCE ON LAN , MINNESOTA
KEY
KEY
KEY
DAT 10.81
FIR GTE LABOR , MICHIGAN STATE UNI COMP CENTER , MINNEAPOLIS
DET
KAP

ABS A NEW LAN PROTOCOL CALLED GROUP-BRAM OR GBRAM IS PRESENTED.
ABS THIS IS AN EXTENSION OF BRAM(BROADCAST RECOGNIZED ACCESS METHOD)
ABS WHICH OPERATES IN A NODE-CLUSTERED ENVIRONMENT, AND IS SUITABLE
ABS FOR A SHARED BUS LAN. GBRAM IS DECENTRALIZED AND CONFLICT-FREE,
ABS AND IT UTILIZES A TWO-LEVEL (A GROUP LEVEL AND A NODE LEVEL)
ABS STRUCTURE OF SCHEDULING TO REDUCE THE OVERALL SCHEDULING OVER-
ABS HEADS. ANALYSIS OF GBRAM SHOWS A SIGNIFICANT IMPROVEMENT OF PER-
ABS FORMANCE OVER BRAM EVEN IN A NON-CLUSTER ENVIRONMENT,PARTICULARLY
ABS IN SITUATION WHERE THE NUMBER OF USERS ON THE NETW IS LARGE.
ABS GBRAM PERFORMANS BEST WHILE NODES IN THE NETW FROM CLUSTERS.
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NUM 281
TIT NETW PROTOCOL TIMING
AUT J. HERSKOVITZ
QUE PROC OF 6TH CONFERENCE ON LAN , MINNESOTA
KEY
KEY
KEY
DAT 10.81
FIR HUGHES AIRCRAFT COMPANY, EL SEGUNDO, CALIFORNIA
DET
KAP

ABS THIS OUTLINES MEASUREMENT METHODOLOGY AND EXPERIENCE GAINED IN
ABS EVALUATION NETW PROTOCOL TIMING. NETW TIMING EXPERIMENTS EM-
ABS PLOYED BOTH SW AND HW MONITORING TECHNIQUES TO OBTAIN MULTI-
ABS LEVEL PROTOCOL MEASUREMENT DATA IN A FULLY CONFIGURED COMPLEX
ABS NETW SYST. NETW PROTOCOL TIMING AT VAROUS LEVELS WAS INVESTI-
ABS GATED AND APPLIED IN DEVELOPPING AN OPERATIONAL MODEL OF THE
ABS NETW TRANSFER PROCESS. MEASUREMENT COMPARED AND CONTRASTED
ABS NETW COMMUNICATION BETWEEN LIKE AND DISIMILIAR HOST COMPUTER.
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NUM 282
TIT SIMULATING A CABLE BUS NET IN A MULTI-COMP AND LARGE SCALE APPL ENV
AUT R.D. KATKIN, J,G, SPRUNG
QUE PROC OF 6TH CONFERENCE ON LAN , MINNESOTA
KEY
KEY
KEY
DAT 10.81
FIR THE MITRE CORPORATOIN MCLEAN, VIRGINIA
DET
KAP

ABS THIS PAPER PRESENTS A SIMULATION METHODOLOGY FOR EVALUATING THE IM-
ABS PACT OF A PARTICULAR CABLE BUS TECHNOLOGY ON THE PERFORMANCE OF A
ABS LARGE IN-SERVICE COMP SYST. PARTICULAR ATTENTION WAS PAID TO MAGNI-
ABS TUDE AND EFFECTS OF NETW OVERHEAD AND THE ASSOCIATED IMPACT ON COMP
ABS CAPACITY.
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NUM 283
TIT CENTRALIZED CONTROL AND MONITORING OF A DISTRIBUTED LAN
AUT J.L. MURPHY
QUE PROC OF 6TH CONFERENCE ON LAN , MINNESOTA
KEY
KEY
KEY
DAT 10.81
FIR DEFENSE SYST DIVISION SPACE & COMMUNIC GROUP, HUGHES AIRCRAFT COMPA
DET
KAP

ABS THE JANET NETW PROVIDES FOR INTERCOMP COMMUNIC AMONG NONHOMOGENEOUS
ABS MAINFRAMES IN A LOCAL, MULTI-POINT DATA NETW. ROUTING OF MESSAGES
ABS BETWEEN NETW HOSTS IS PERFORMED BY REFERENCING CONFIGURATION TABLES
ABS WHICH ARE MAINTAINED BY THE NETW SW IN EACH HOST. THE NETW CONFIGU-
ABS RATION MAY BE MONITORED AND CONTROLLED CENTRALLY FROM A SINGLE
ABS OPERATOR POSITION WITH THE AID OF AN APPLICATION-LEVEL PROGRAM, THE
ABS NETW MONITOR PROGRAM. THIS DISCUSSES THE BASIC PRINCIPLES UNDERLAY-
ABS ING THE JANET NETW DESIGN WHICH ALLOW FOR CENTRALIZED AS WELL AS
ABS DISTRIBUTED MONITORING AND CONTROL.
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NUM 284
TIT BIT RATES IN LINEAR COMMON CABLE LAN
AUT M. GRAHAM
QUE PROC OF 6TH CONFERENCE ON LAN , MINNESOTA
KEY
KEY
KEY
DAT 10.81
FIR ELECTRICAL ENGENEER AND COMP SCIENCE DEPART,UNI OF CALIFOR,BERKELEY
DET
KAP

ABS THE PERFORMANCE OF LAN USING A LINEAR COMMON CABLE CAN BE ENHANCED
ABS BY USING MULTIPLE DATA RATES. THE BUS ACQUISITION AND RELEASE
ABS PROTOCOLS CAN ALSO BE IMPROVED BY USING AN INDUCTIVELY COUPLED
ABS HYBRID CONNECTOR.
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NUM 285
TIT THE APPLIC OF VARIAB DATA RATE,TRANSM TO LOC AREA FIBER OPTIC NETW
AUT CH. R. HUSBANDS
QUE PROC OF 6TH CONFERENCE ON LAN , MINNESOTA
KEY
KEY
KEY
DAT 10.81
FIR THE MITRE CORPORATION BEDFORD, MA
DET
KAP

ABS INITIAL EXAMINATION OF THE USE OF FIBER OPTICS IN LAN SYST USING
ABS CONTENTION PROTOCOL, CONCENTRATED ON APPLICATIONS SUPPORTING LOW
ABS DATA RATE TRANSMISSION. THE DEVELOPMENT OF THESE NETW UTILIZED LOW
ABS COST LSI MICROPROCESSOR BASED TERMINAL INITS. WITH A REQUIREMENT TO
ABS ALLOW LARGER COMPUTERS TO EXCHANGE DATA BASES OVER THIS SAME NETW,
ABS A MAJOR CONFLICT OCCURRED. THIS DUAL USE OF THE NETW REQUIRED A
ABS COMPROMISE BETWEEN TERMINAL COST, REQUIRED TO SUPPORT HIGHER DATA
ABS RATE TRANSMISSION, AND THE TIME PENALTY IMPOSED BY TRANSMITTING THE
ABS COMP DATA BASES AT A LOW DATA RATE. TO SOLVE THIS PROBLEM A VARIABL
ABS DATA RATE NETW WAS DEVELOPED WHICH MORE EFFICIENTLY UTILIZED THE
ABS HANDWIDTH CAPABILITY OF THE FIBER OPTIC TRANSMISSION MEDIUM. THIS
ABS WILL DESCRIBE A DEMONSTRATION SYST DESIGNED TO SUPPORT THIS DUAL
ABS DATA RATE CAPABILITY.
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NUM 286
TIT IMPLEMENTING ELECTRONIC MAIL IN A TELEPHONE SYSTEM: MORE THAN JUST TALK
AUT G.TOMANEK
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 367-371)
KEY ELECTRONIC MAIL - CBX - PABX - TDM - REMS (ROLM ELECTRONIC MAILBOX SYSTEM)
KEY INTEGRATED VOICE AND DATA COMMUNICATION
KEY
DAT 1980
FIR ROLM CORP., SANTA CLARA, CALIFORNIA
DET ---
KAP

ABS THIS PAPER DESCRIBES THE EVOLUTION OF A DIGITAL TELEPHONE SYSTEM INTO AN
ABS INTEGRATED VOICE AND TEXT INFORMATION SYSTEM. A SPECIFIC TYPE OF
ABS ELECTRONIC MAIL CAN NOW BE PROVIDED FROM THE TELEPHONE SYSTEM TO GIVE THE
ABS OFFICE WORKERS A MORE COMPLETE INFORMATION SYSTEM, AIMED AT INCREASING
ABS THEIR PRODUCTIVITY. IT ALSO ILLUSTRATES THE POTENTIAL FUTURE ROLE OF THE
ABS DIGITAL TELEPHONE SYSTEM AS THE BRAIN AND CENTRAL NERVOUS SYSTEM OF THE
ABS OFFICE OF THE FUTURE. AND IT BRINGS FORWARD SOME OF THE ORGANIZATIONAL
ABS IMPACT THAT WILL ACCOMPANY THE MOVE INTO THE FUTURE.
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NUM 287
TIT COMPUTER STORAGE STRUCTURE AND UTILIZATION AT A LARGE SCIENTIFIC LABORATORY
AUT J.G. FLETCHER, S.FERNBACH, P.J. DUBOIS, G.L. BOER
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 336-345)
KEY BACK END - RESOURCE SHARING - STORAGE TYPES - FILE ORGANIZATION
KEY OCTOPUS - ELEPHANT
KEY
DAT 01.75
FIR LAWRENCE LIVERMORE LABORATORIES, UNIVERSITY OF CALIFORNIA, LIVERMORE, CA.
DET ---
KAP

ABS THE OCTOPUS COMPUTER NETWORK AT LLL TIES TOGETHER ONE OF THE LARGEST
ABS CONCENTRATIONS OF COMPUTING CAPABILITY IN THE WORLD, SERVING ABOUT 1500
ABS USERS. THE NETWORK'S INFORMATION STORAGE CAPACITY IS LARGE IN EVERY RANGE
ABS OF ACCESS SPEED. THERE ARE COMPUTERS WITH MAIN MEMORIES OF 30 MBITS AND
ABS SECONDARY STORAGE OF 10 GBITS, A SHARED TERTIARY STORE OF 1 TBIT, AND 30 -
ABS 40 THOUSAND REELS OF MAGNETIC TAPE. THIS STORAGE SUPPORTS CORRESPONDINGLY
ABS LARGE NUMERICAL SIMULATIONS AND OTHER APPLICATION PROGRAMS THAT REQUIRE
ABS THE CONTINUOUS OPERATION OF FOUR MAJOR COMPUTERS. EFFICIENT STORAGE USE
ABS NECESSITATES PROPER DESIGN OF ALGORITHMS AND BUFFER STRUCTURES ON THE PART
ABS OF BOTH THE USERS AND THE SYSTEM IMPLEMENTORS. THE DISCUSSION COVERS THE
ABS ISSUES: MAINTENANCE OF HIGH DATA TRANSFER RATES, RELIABILITY IN THE
ABS PRESENCE OF INTERMITTENT HARDWARE FAILURE, ACHIEVING BALANCE BETWEENMEDIA
ABS WITH DIFFERING ACCESS SPEEDS, FLEXIBILITY OF THE INDEXING STRUCTURE, AND
ABS EQUITABLE ALLOCATION AMONG USERS.
ABS

NUM 288
TIT LABOLINK: AN OPTICALLY LINKED LABORATORY COMPUTER NETWORK
AUT S. YAJIMA, Y. KAMBAYASHI, S. YOSHIDA, K.IWAMA
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 328-335)
KEY TERMINAL SWITCHING - OPTICAL FIBER TRANSMISSION - BROADBAND COMMUNICATION
KEY SIMPLE LINE MULTI CONNECTOR (SLMC)
KEY
DAT 11.77
FIR KYOTO UNIVERSITY, KYOTO, JAPAN
DET ---
KAP

ABS KYOTO UNIVERSITY HAS DEVELOPED A LABORATORY COMPUTER NETWORK THAT
ABS DEMONSTRATES AN EASY YET VERSATILE WAY OF ACCESSING SEVERAL KINDS OF
ABS COMPUTERS FROM A SINGLE SMALL-SCALE COMPUTER. KNOWN AS LABOLINK THE
ABS NETWORK IS DESIGNED TO SUPPORT LABORATORY RESEARCH AND EDUCATION. UNLIKE
ABS THE RIG SYSTEM, LABOLINK REQUIRED NO MODIFICATION OF THE EXIXTING
ABS OPERATING SYSTEM. LABOLINK SEEMES TO BE THE FIRST WORKING COMPUTER NETWORK
ABS TO BE LINKED BY FIBER OPTIC CABLES. IN ADDITION IT REFLECTS A COMPUTER
ABS COMMUNICATION INTERFACE DESIGN METHOD THAT IS BASED ON AUTOMATA THEORY.
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NUM 289
TIT DEVELOPMENT OF THE LASL COMPUTER NETWORK
AUT R.D. CHRISTMAN
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 324-327)
KEY HYDRA - REMOTE TERMINALS - COMMON DATABASE - SHARED DATABASE
KEY FRONT END - CDC6600 - CDC7600
KEY
DAT 1973
FIR LOS ALAMOS SCIENTIFIC LABORATORY, LOS ALAMOS, NEW MEXICO
DET ---
KAP

ABS THE NETWORK BEING DEVELOPED AT THE LOS ALAMOS SCIENTIFIC LABORATORY WILL
ABS LINK TOGETHER SEVERAL LARGE (SUPER) COMPUTERS, A LARGE DATABASE AND A
ABS VARIETY OF REMOTE COMPUTERS AND TERMINALS. THE MAJOR GOALS OF THE NETWORK
ABS ARE TO PROVIDE A COMMON DATA BASE FOR ALL USERS AND COMPUTERS AND A
ABS SIGNIFICANT REMOTE TERMINAL CAPABILITY. THE TECHNICAL ASPECTS OF THE
ABS NETWORK SOFTWARE AND HARDWARE ARE DESCRIBED ALONG WITH THE DESIGN AND
ABS IMPLEMENTATION EXPERIENCE AND THE PROJECTED COSTS.
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NUM 290
TIT RIG ROCHESTER'S INTELLIGENT GATEWAY: SYSTEM OVERVIEW
AUT J.E. BALL, J. FELDMAN, J.R. LOW, R. RASHID, P. ROVNER
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 316-323)
KEY GATEWAY - ETHERNET - ARPANET - RIG - DEC KL10 - IBM 360/65
KEY ALEPH - DISTRIBUTED COMPUTING - DATA GENERAL ECLIPSE - MESSAGE SWITCHING
KEY RESOURCE SHARING - INTERNETWORKING - INTERPROCESS COMMUNICATION
DAT 12.76
FIR UNIVERSITY OF ROCHESTER, ROCHESTER, NY
DET GATEWAY OPERATING SYSTEM, INTELLIGENT GATEWAY FUNCTIONS
KAP

ABS ROCHESTER'S INTELLIGENT GATEWAY SYSTEM (RIG) PROVIDES CONVENIENT ACCESS TO
ABS A WIDE RANGE OF COMPUTING FACILITIES. THE SYSTEM INCLUDES FIVE LARGE
ABS MINICOMPUTERS IN A VERY FAST INTERNAL NETWORK, DISK AND TAPE STORAGE A
ABS PRINTER/PLOTTER AND A NUMBER OF DISPLAY TERMINALS. THESE ARE CONNECTED TO
ABS LARGER CAMPUS MACHINES (IBM 360/65 AND DEC KL10) AND TO THE ARPANET. THE
ABS OPERATING SYSTEM AND OTHER SOFTWARE SUPPORT FOR SUCH A SYSTEM PRESENT SOME
ABS INTERESTING DESIGN PROBLEMS. THIS PAPER CONTAINS A HIGH-LEVEL TECHNICAL
ABS DISCUSSION OF THE SOFTWARE DESIGNS.
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NUM 291
TIT A LOCAL NETWORK OF MINI AND MICROCOMPUTERS FOR EXPERIMENT SUPPORT
AUT A.V. POHM, J.A. DAVIS, S. CHRISTIANSEN, G.D BRIDGES, R.E. HORTON
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 215-220)
KEY RECIRCULATING LOOP - CENTRAL CONTROL - PERSONAL COMPUTERS
KEY UNIX - PDP11 - COMMODORE PET - PACKET SWITCHING - CIRCULATING SLOTS
KEY
DAT 1979
FIR IOWA STATE UNIVERSITY, AMES, IOWA
DET HARDWARE, PROTOCOL
KAP

ABS A NETWORK OF MINI AND MICROCOMPUTERS HAS BEEN CONSTRUCTED AND PUT INTO
ABS SERVICE TO SUPPORT THE USE OF PERSONAL AND MICROCOMPUTERS IN EXPERIMENT
ABS CONTROL AND DATA ACQUISITION. THE COMMUNICATION FOR THE NETWORK IS
ABS PROVIDED BY A RECIRCULATING LOOP OPERATING AT AN EFFECTIVE BIT RATE OF
ABS 3.088 MBIT/SEC. TWO MODES OF COMMUNICATION ARE SUPPORTED BY THE LOOP.
ABS COMMUNICATION CAN BE FROM DISPERSED STATIONS TO A CENTRAL STATION OR FROM
ABS ONE GENERAL PURPOSE STATION TO ANOTHER. THE EXISTING CENTRAL FACILITY
ABS CONSISTS OF AN INTERFACED PDP11/34 WITH A UNIX OPERATING SYSTEM AND 120
ABS MBYTE OF DISK STORAGE. EACH CENTRALLY COMMUNICATING STATION SUPPORTS EIGHT
ABS COMMODORE PETS WHICH SERVE AS STAND-ALONE PERSONAL COMPUTERS AS TERMINALS
ABS ON THE UNIX SYSTEM OR AS PERSONAL COMPUTERS WITH EXTENDED DISK STORAGE
ABS PROVIDED VIA THE NET. THE CENTRAL FACILITY PROVIDES COMPILERS, CROSS
ABS ASSEMBLERS, LANGUAGE, AND OTHER SUPPORT IN ADDITION TO DISK STORAGE.
ABS
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NUM 292
TIT A SERIAL DATA BUS SYSTEM FOR LOCAL PROCESSING NETWORKS
AUT R.C. KUHNS, M.C. SHOQUIST
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 190-194)
KEY BUS - BASEBAND - MANCHESTER ENCODING - SHINPADS - SELECTIVE POLLING
KEY
KEY
DAT 1979
FIR SPERRY UNIVAC DEFENSE SYSTEMS DIVISION
DET PERFORMANCE
KAP

ABS THIS PAPER DESSCRIBES A SERIAL DATA BUS FOR LOCAL PROCESSING NETWORK
ABS APPLICATIONS. THE BUS SYSTEM INTERCONNECTS UP TO 256 USERS AT A PRIMARY
ABS BUS RATE OF 10 MBITS/SECOND OVER A TRIAXIAL CABLE MEDIUM. SPECIAL EMPHASIS
ABS HAS BEEN PLACED ON THE SURVIVABILITY AND RECONFIGURATION CAPABILITIES OF
ABS THE SYSTEM ATTENDANT TO ITS APPLICATION IN A MILITARY TACTICAL
ABS ENVIRONMENT. THE RELATIONSHIP BETWEEN BUS THROUGHPUT AND ACCESS TIME FOR A
ABS SPECIFIC MILITARY SYSTEM APPLICATION IS REVIEWD INCLUDING THE RESULTS OF A
ABS MODELING PROGRAM.
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NUM 293
TIT A NETWORK COMPUTER FOR DISTRIBUTED PROCESSING
AUT W. HUEN, P. GREENE, R. HOCHSPRUNG, O. EL-DESSOUKI
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 185-189)
KEY DISTRIBUTED PROCESSING - RING - PARALLEL COMPUTING - LSI11
KEY DISTRIBUTED CONTROL - DCS - SPIDER - DYNAMO COMPILER
KEY
DAT 1977
FIR ILLINOIS INSTITUTE OF TECHNOLOGY, CHICAGO, ILLINOIS
DET PIPELINED COMPILING
KAP

ABS THE TECHNEC IS A NETWORK COMPUTER IN THE FORM OF RING OF MICROCOMPUTERS
ABS (LSI11S), DESIGNED FOR RESEARCH IN DISTRIBUTED PROCESSING. THE DESIGN
ABS OBJECTIVES, ARCHITECTURE AND SOFTWARE SUPPORT OF THE SYSTEM ARE PRESENTED.
ABS MAJOR USER REQUIREMENTS SUCH AS PIPELINED COMPILING, AUTOMATIC
ABS PARTITIONING , AND DISTRIBUTED CONTROL OF MACHINE INTELLIGENCE
ABS APPLICATIONS ARE CONSIDERED.
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NUM 294
TIT A LOCAL NETWORK
AUT W. WULF, R. LEVIN
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 114-117)
KEY DISTRIBUTED PROCESSING - RESOURCE SHARING - C.MMP - HYDRA
KEY PARALLEL PROCESSING - CIRCUIT SWITCHING
KEY
DAT 02.75
FIR CARNEGIE MELLON UNIVERSITY, PITTSBURGH
DET ---
KAP

ABS C.MMP, A MULTIMINIPROCESSOR DESIGNED AT CARNEGIE MELLON UNIVERSITY, IS A
ABS CIRCUIT SWITCH NETWORK. IN C.MMP, UP TO 16 PROCESSORS SHARE 16 MODULES OF
ABS PRIMARY MEMORY THROUGH A CROSSBAR SWITCH, EFFECTIVELY USING CIRCUIT SWITCH
ABS TRANSPORT TECHNOLOGY. EACH PROCESSOR IS A COMPLETE MINICOMPUTER WITH ITS
ABS OWN LOCAL MEMORY, PERIPHERAL DEVICES, AND MAPPING FUNCTION, WHICH MAPS THE
ABS (16-BIT) ADDRESSES GENERATED BY THE PROCESSOR TO THE (21-BIT) PRIMARY
ABS MEMORY ADDRESSES OR TO THE ADDRESSES USED BY AN INTERNAL UNIBUS. AND EACH
ABS PROCESSOR CAN EVOKE A CERTAIN FUNCTION ON ANY COLLECTION OF PROCESSORS
ABS THROUGH A MECHANISM PROVIDED BY THE INTERPROCESSOR BUS, A CONTROLLER, AND
ABS THE APPROPRIATE INTERFACES. C.MMP IS CLASSIFIED AS LOCAL NETWORK
ABS ARCHITECTURE RATHER THAN MULTIPROCESSOR ARCITECTURE BECAUSE OF ITS USE OF
ABS CIRCUIT-SWITCH-TRANSPORT TECHNOLOGY, ITS MAPPING FUNCTION AND ITS USE OF
ABS LOCAL MEMORY FOR EACH PROCESSOR IN THE SYSTEM.
ABS
ABS

NUM 295
TIT DESIGN OF A PACKET-SWITCHED MICRO SUBNETWORK
AUT KUANG-SHIN LIN
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 95-104)
KEY PACKET SWITCHING - STORE AND FOREWARD - IMP - STATIC ROUTING
KEY RANDOM TOPOLOGY - SWITCHING NODE - SUBNETWORK
KEY
DAT 1978
FIR ROCHESTER INSTITUTE OF TECHNOLOGY, ROCHESTER, NY
DET IMP HARDWARE, PROTOCOL, ROUTING, CONTROL
KAP

ABS A MODULAR DESIGN OF IMP'S USING MICROPROCESSOR AND PROGRAMMABLE INTERFACE
ABS CHIPS IS DISCUSSED. DUE TO THE LIMITED CAPABILITIES OF MICROPROCESSORS IN
ABS GENERAL, THE PACKET-SWITCHED NETWORK RELATED PROBLEMS SUCH AS
ABS SYNCHRONIZATION, BUFFERING, ROUTING, RELIABILITY, ERROR CONTROL, AND OTHER
ABS ISSUES ARE SOLVED USING SOME SIMPLE YET POWERFUL AND FLEXIBLE SCHEMES.
ABS THESE METHODS SEEME TO BE COST-EFFECTIVE AND APPLICABLE FOR SMALL-TO-
ABS MEDIUM SCALE PACKET-SWITCHED SUBNETWORKS.
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NUM 296
TIT MICRONET: A RECONFIGURABLE MICROCOMPUTER NETW FOR DISTRIB SYST RESEARCH
AUT L.D. WITTIE
QUE LOCAL COMPUTER NERWORKS - TUTORIAL (PP. 86-94)
KEY DISTRIBUTED PROCESSING - SHARED BUS - PACKET SWITCHING - FRONT END
KEY DISTRIBUTED OPERATING SYSTEM - PARALLEL LANGUAGE - LSI11
KEY
DAT 11.78
FIR STATE UNIVERSITY OF NEW YORK AT BUFFALO, AMHERST, NY
DET DISTRIB SIMULATION SYSTEM, DISTRIB OPERAT SYS, STRUCT & DESIGN OF MICRONET
KAP

ABS MICRONET IS A RECONFIGURABLE NETWORK OF CLOSELY COUPLED MICROCOMPUTERS
ABS INTENDED FOR GENERAL-PURPOSE COMPUTING. THE INITIAL SYSTEM WILL CONSIST OF
ABS 16 DEC LSI-11'S EACH WITH ITS OWN SET OF PERIPHERALS. THE NODES ARE LINKED
ABS VIA FRONT-END COMPUTERS WHICH SEND PACKET-SWITCHED MESSAGES OVER SHARED
ABS BUSES WHICH FORM A PASSIVE COMMUNICATIONS NETWORK. MICRONET HAS BEEN
ABS DESIGNED TO BE A FLEXIBLE RESEARCH AND SIMULATION TOOL FOR STUDYING
ABS DISTRIBUTED COMPUTER HARDWARE AND SOFTWARE.THE TOPOLOGY OF ITS
ABS COMMUNICATIONS NETWORK CAN BE ALTERED SIMPLY BY RECONFIGURING CABLES TO A
ABS BUS-DEFINITION BOARD. SOFTWARE FOR MICRONET WILL INCLUDE A DISTRIBUTED
ABS OPERATING SYSTEM, PARALLEL PROGRAMMING LANGUAGES, AND A NETWORK VERSION OF
ABS A SIMULATION SYSTEM FOR MODELING THE BRAIN.
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NUM 297
TIT SPIDER - AN EXPERIMENTAL DATA COMMUNICATIONS SYSTEM
AUT A.G. FRASER
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 51-60)
KEY PACKET SWITCHING - SWITCHED DATA COMMUNICATION - TRANSMISSION LOOP
KEY VIRTUAL CHANNEL - CONTROL SWITCHING - COMMON CONTROL - RING - TEMPO 1 - FLY
KEY
DAT 1974
FIR BELL LABORATORIES, MURRAY HILL, NEW JERSEY
DET COMMUNICATION PROTOCOL - CONTROL MESSAGES - IMPLEMENTATION
KAP

ABS SPIDER IS AN EXPERIMENTAL PACKET SWITCHED DATA COMMUNICATIONS SYSTEM THAT
ABS PROVIDES 64 FULL DUPLEX ASYNCHRONOUS CHANNELS TO EACH CONNECTED TERMINAL.
ABS THE MAX. DATA RATE PER CHANNEL IS 500 KBITS/SEC. ERROR CONTROL BY PACKET
ABS RETRANSMISSION IS AUTOMATIC AND TRANSPARENT TO USERS. TERMINALS ARE
ABS CONNECTED TO A CENTRAL SWITCHING COMPUTER BY T1 CARRIER TRANSMISSION LOOPS
ABS (OPERATING AT 1.544 MBIT/S), EACH OF WHICH SERVES SEVERAL TERMINALS. THE
ABS INTERFACE BETWEEN THE TRANSMISSION LOOP AND A TERMINAL CONTAINS A STORED
ABS PROGRAM MICROCOMPUTER. COOPERATION BETWEEN THE MICROCOMPUTERS AND THE
ABS CENTRAL SWITCHING COMPUTER EFFECTS TRAFFIC CONTROL, ERROR CONTROL, AND
ABS VARIOUS OTHER FUNCTIONS RELATED TO THE NETWORK OPERATION AND MAINTENANCE.
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NUM 298
TIT DISTRIBUTED INDUSTRIAL CONTROL USING A NETWORK OF MICROCOMPUTERS
AUT O.R. HINTON, F.K. HANNA, K.R. DIMOND
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 47-50)
KEY DISTRIBUTED CONTROL - PACKET SWITCHING - HUYGENS MODE
KEY INTERCOMMUNICATION - LSI11 - FLOODING
KEY
DAT 1977
FIR THE UNIVERSITY OF KENT AT CANTERBURY, CANTERBURY, KENT, ENGLAND
DET HUYGENS MODE
KAP

ABS THIS PAPER DESCRIBES WORK BEING UNDERTAKEN TO INVESTIGATE THE USE OF A
ABS DISTRIBUTED, HETERARCHICAL SET OF MICROCOMPUTERS FOR THE CONTROL OF
ABS INDUSTRIAL PROCESSES FOCUSSING PARTICULARLY ON A NEW NETWORK COMMUNICATION
ABS STRATEGY. IN MANY INSTANCES, A PROCESS PLANT MAY BE CONSIDEREDAS BEING
ABS MADE UP OF A NUMBER OF PHYSICALLY DISTRIBUTED CENTRES OF CONTROL ACTIVITY.
ABS THE APPROACH DESCRIBED HERE ASSOCIATES WITH EACH OF THE CENTRES A
ABS RELATIVELY INEXPENSIVE CONTROLLER BASED ON MICROCOMPUTER, TO EFFECT LOCAL
ABS CONTROL. EACH SUCH CONTROLLER HAS HIGHLY SOPHISTICATED CHARACTERISTICS.
ABS THE DATA COMMUNICATION REQUIREMENTS BETWEEN CONTROLLERS IS EFFECTED WITH A
ABS SPARSE NETWORK OF LOW COST, POTENTIALLY NOISY, LINES. WE HAVE DEVELOPED A
ABS PACKET SWITCH ALGORITHMWHOSE PARTICULAR CHARACTERISTICS ARE RELIABILITY,
ABS THE ABILITY TO CONNECT ANY NUMBER OF CONTROLLERS, IN ANY ARBITRARY MANNER,
ABS AND THE SIMPLICITY AND CHEAPNESS OF TNE FIRMWARE AND HARDWARE TO IMPLEMENT
ABS IT.
ABS

NUM 299
TIT CM - A MODULAR, MULTI-PROCESSOR
AUT R.J. SWAN, S.H.FULLER, D.P. SIEWIOREK
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 39- 46)
KEY PACKET SWITCHING - BUS - MULTI PROCESSOR COMPUTER
KEY MAPPING PROCESSOR (KMAP) - SHARED MEMORY - MAP BUS
KEY INTERCLUSTER BUS - PDP11 - LSI11
DAT 1977
FIR CARNEGIE MELLON UNIVERSITY, PITTSBURGH, PENNSYLVANIA
DET ARCHITECTURE OF ADDRESS TRANSLATION MECHANISM
KAP

ABS THIS PAPER DESCRIBES THE ARCHITECTURE OF A NEW LARGE MULTI-PROCESSOR
ABS COMPUTER SYSTEM BEING BUILT AT THE CARNEGIE MELLON UNIVERSITY. THE SYSTEM
ABS ALLOWS CLOSE COOPERATION BETWEEN LARGE NUMBERS OF INEXPENSIVE PROCESSORS.
ABS ALL PROCESSORS SHARE ACCESS TO A SINGLE VIRTUAL MEMORY ADDRESS SPACE.
ABS THERE ARE NO ARBITRARY LIMITS ON THE NUMBER OF PROCESSORS, AMOUNT OF
ABS MEMORY OR COMMUNICATION BANDWIDTH IN THE SYSTEM. CONSIDERABLE SUPPORT IS
ABS PROVIDED FOR LOW LEVEL OPERATING SYSTEM PRIMITIVES AND INTER-PROCESS
ABS COMMUNICATION.
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NUM 300
TIT LOCAL NETWORKS OF PERSONAL COMPUTERS
AUT E.P. STRITTER, H.J. SAAL, L.J. SHUSTEK
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 349-352)
KEY CLUSTER/ONE - RANDOM TOPOLOGY - APPLE - CSMA - PACKET TRANSMISSION
KEY
KEY
DAT 1981
FIR NESTAR SYSTEMS INC., PALO ALTO, CA.
DET ---
KAP

ABS A COMMERCIALLY AVAILABLE LOCAL COMPUTER NETWORK OF PERSONAL COMPUTERS IS
ABS DESCRIBED HERE. THE SYSTEM COMBINES THE ADVANTAGES OF PERSONAL COMPUTERS
ABS (LOW COST PER USER, A COMPUTER ON EVERY DESK, ETC.) WITH THOSE OF LOCAL
ABS COMPUTER NETWORKS (ACCESS TO SHARED RESOURCES, COST SHARING OF EXPENSIVE
ABS PERIPHERALS, SMOOTH SYSTEM GROWTH WITH CONSTANT COMPUTE POWER PER USER.)
ABS MANY NEW CAPABILITIES DERIVE FROM LOCAL COMPUTER NETWORKS SUCH AS SHARING
ABS OF DATA, COMPUTER-TO-COMPUTER COMMUNICATION, AND INTELLIGENT SERVER
ABS RESOURCES (SHARED HIGH-SPEED PRINTERS, FILE SYSTEMS, DATA-BASE BACKENDS,
ABS ETC.) THIS PAPER DISCUSSES THE NETWORK AND INTERNETWORK CONFIGURATIONS
ABS WHICH MAKE SUCH CAPABILITIES POSSIBLE.
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NUM 301
TIT LOCAL NETWORK GIVES NEW FLEXIBILITY TO DISTRIBUTED PROCESSING
AUT C. BASS, J.S. KENNEDY, J.M. DAVIDSON
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 358-366)
KEY NET/ONE - ETHERNET - PACKET SWITCHING - DATAGRAM - VIRTUAL CIRCUIT
KEY DISTRIBUTED PROCESSING - RESOURCE SHARING - GATEWAY - DISTRIBUTED CONTROL
KEY
DAT 09.80
FIR UNGERMANN - BASS, INC., SANTA CLARA, CA.
DET ARCHITECTURE, NETWORK INTERFACE UNIT (NIU)
KAP

ABS MOST PROPRIETARY LOCAL COMPUTER NETWORKS ARE DEDICATED TO JUST ONE
ABS VENDOR'S EQUIPMENT. THE NEWLY AVAILABLE NET/ONE, HOWEVER, INTERFACES WITH
ABS A WIDE VARIETY OF EQUIPMENT - ANYTHING WITH EITHER THE INDUSTRY-STANDARD
ABS RS-232-C SERIAL INTERFACE OR A TTL-LEVEL PARALLEL INTERFACE. BECAUSE IT
ABS RECONCILES PROTOCOLS OF VARIOUS DEVICES BY MEANS OF PROGRAMMABLE
ABS INTERFACES, THE THOUSANDS OF DEVICES THAT MAY BE CONNECTED TO NET/ONE -
ABS INTEELIGENT TERMINALS, DATA BASES, MICROCOMPUTERS, MULTIUSER MAINFRAMES,
ABS OR WHATEVER - CAN ALL BE MADE UP TO COMMUNICATE WITH EACH OTHER REGARDLESS
ABS OF THEIR MANUFACTURER. NET/ONE ALSO SUPPLIES A HITHERTO UNATTAINABLE
ABS CONTROL OF DISTRIBUTED DATA-PROCESSING RESOURCES. ITS USER CAN SWITCH
ABS TERMINALS BETWEEN HOSTS OR SHARE EXPENSIVE PERIPHERALS, APPLICATION
ABS PROGRAMS, AND DATA-BASE MANAGEMENT SYSTEMS WITH OTHER USERS OR EVEN GAIN
ABS ACCESS TO THE FACILITIES OF A REMOTE NET/ONE.
ABS
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NUM 302
TIT LOCALNET: A DIGITAL COMMUNICATIONS NETWORK FOR BROADBAND COAXIAL CABLE
AUT K.J. BIBA
QUE LOCAL COMPUTER NETWORKS - TUTORIAL (PP. 353-357)
KEY BROADBAND - LOCALNET - PACKET SWITCHING - CATV - FDM
KEY VIRTUAL CIRCUIT - CSMA/CD - ISO - CCITT X.28/X.3/X.25
KEY GATEWAY - TDM - IBM 3270
DAT 1981
FIR SYTEK, INC., SUNNYVALE, CA.
DET ---
KAP

ABS LOCALNET IS A LOW COST, HIGH PERFORMANCE DATA COMMUNICATIONS NETWORK.
ABS BASED ON A SYNERGISTIC COMBINATION OF BROADBAND ANALOG, DIGITAL AND PACKET
ABS SWITCHING COMMUNICATIONS TECHNOLOGIES, LOCALNET OFFERS SUBSTANTIAL
ABS FUNCTIONAL, PERFORMANCE AND OPERATIONAL ADVANTAGES OVER CONVENTIONAL LOCAL
ABS NETWORKS. UTILIZING INDUSTRY STANDARD CABLE TV (CATV) DATA DISTRIBUTION
ABS FACILITIES, LOCALNET BUILDS ATRANSPARENT, HIGH PERFORMANCE, COMMUNICATIONS
ABS SYSTEM INCORPORATING DISTRIBUTED NETWORK INTELLIGENCE. THIS APPROACH
ABS PROVIDES FOR THE INTERCONNECTION OF A WIDE RANGE OF USER EQUIPMENTS, END-
ABS TO-END DATA SECURITY, CONFIGURATION FLEXIBILITY, AND EASE OF INSTALLATION.
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NUM 303
TIT NET-11 FUR DEC-MASCHINEN
AUT ---
QUE PROSPECT
KEY
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DAT
FIR GDV, GESELLSCHAFT FUR ELEKTRONISCHE DATENVERARBEITUNG
DET
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NUM 304
TIT 3-YEAR PROGRAMME OF ETHERNET PRODUCTS
AUT ---
QUE DECUS EUROSCOPE AUGUST 1982
KEY ETHERNET - DECNET - DNA PHASE 4 - X.25 - SNA - IBM - IMS
KEY RJE - JES 2/3 - 3270 - DDCMP - DECNET/SNA GATEWAY - CICS
KEY H4000 ETHERNET TRANSCEIVER - DEUNA COMM. CONTROLLER
DAT 08.82
FIR DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASS.
DET ---
KAP

ABS DEC HAS ANNOUNCED A 3-YEAR PROGRAMME COVERING A BROAD RANGE OF ETHERNET
ABS HARDWARE AND SOFTWARE PRODUCTS THAT WILL BE INTEGRATED INTO PHASE IV OF
ABS DNA. THE PROGRAMME PROVIDES A FULL RANGE OF NETWORKING PRODUCTS FOR LANS
ABS AND GLOBAL NETWORKS. DIGITAL IS TO INTRODUCE WITHIN A YEAR A DEDICATED
ABS COMPUTER SYSTEM TO LINK DECNET WITH IBM SNA NETWORKS. CALLED THE
ABS DECNET/SNA GATEWAY THE SYSTEM WILL ENABLE PDP-11 AND VAX-11 COMPUTERS
ABS LINKED BY DECNET TO COMMUNICATE WITH IBM COMPUTER SYSTEMS. RJE MODULE
ABS SUPPORTS IBM'S JES-2 AND JES-3 3270 MODULE INTERACTS WITH IBM'S IMS AND
ABS CICS PHASE IV SUPPORTS CCITT X.25 AND ETHERNET
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NUM 305
TIT IBM'S LOCAL NETWORK SCHEME
AUT WENDY RAUCH
QUE DATA COMM MAY 82
KEY
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DAT MAY 82
FIR DATA COMMUNICATIONS
DET
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NUM 306
TIT COMPUTER NETWORKS
AUT ANDRWE S. TANENBAUM
QUE PRENTICE-HALL
KEY
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KEY
DAT 1982
FIR
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NUM 307
TIT COMPUTER NETWORKS AND THEIR PROTOCOLS
AUT DAVIES, BARBER, PRICE, SOLOMONIDES
QUE JOHN WILEY
KEY
KEY
KEY
DAT 1979
FIR
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NUM 308
TIT LOCAL NETWORKS
AUT W.R. FRANTA, I. CHLAMTAC
QUE LEXINGTON BOOKS
KEY
KEY
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DAT 1982
FIR
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NUM 309
TIT DISTRIBUTED PROCESSING AND DATA COMMUNICATIONS
AUT D.R. MCGLYNN
QUE JOHN WILEY
KEY
KEY
KEY
DAT 1978
FIR
DET
KAP

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NUM 310
TIT HYPERBUS SYSTEMS DESCRIPTION MANUAL
AUT --
QUE NETWORK SYSTEMS CORP
KEY
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DAT 5.1982
FIR NSC
DET
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NUM 311
TIT NETWORK EXECUTIV SOFTWARE (NETEX) INFORMATION MANUAL
AUT --
QUE NETWORK SYSTEMS CORP
KEY
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DAT 4.1982
FIR NSC
DET
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NUM 312
TIT EIN EXPERIMENTELLES DEZENTRAL-GESTEUERTES .NETZ MIT OPTISCHEM BUS
AUT A. SAUER
QUE PROC OMLINE '82, DUESSELDORF
KEY DIALOGSTATIONEN-VERARBEITUNGSSTATIONEN-REALTIMESTATIONEN-GERATE
KEY SPEZIFISCHE STATIONEN-OPTOKOPPLER-SENDEFASER-EMPFANGSFASER-DETERM/
KEY WAHLFREIER ZUGRIFF-KERNBETRIEBSYS-STATIONSMANAGEMENT-NETZMAMAGEMENT
DAT 02.82
FIR SIEMENS, MUENCHEN
DET
KAP 2.3

ABS DAS HIER VORGESTELLTE EXPERIMENTELLE MEHRRECHNERNETZ KONZENTRIERT
ABS DIE EIN- UND AUSKOPPELVERLUSTE IN EINEM OPTISCHEN MISCHER, DER
ABS INFOLGE SEINES LOGISCHEN VERHALTENS DIE FUNKTION EINES BUSSES
ABS AUSUEBT. DER BEITRAG BESCHREIBT DAS ARCHITEKTURELLE KONZEPT EINES
ABS FORSCHUNGSORIENTIERTEN EXPERIMENTELLEN LOKALEN KOMMUNIKATIONS-
ABS NETZES MIT ZUFALLSABHAENGIGER UND DETERMINISTISCHER KOMMUNIKATIONS-
ABS STEUERUNG. ES VERBINDET MAXIMAL 100 STATIONEN MIT MAXIMAL 50 MBIT/S
ABS IM KILOMETERBEREICH. CHARAKTERISTISCHE BESONDERHEITEN, WIE SYSTEM-
ABS KONZEPT, SYSTEMVERZOEGERUNG, BUSZUGRIFFE UND NETZWERKMANAGEMENT
ABS WERDEN ABGEHANDELT.
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NUM 313
TIT COMPARING THE CBX TO THE LOCAL NETWORK - AND THE WINNER IS?
AUT G.M. PFISTER;B.V. O'BRIEN
QUE DATA COMMUNICATIONS, JULY 1982, S.103-113
KEY
KEY
KEY
DAT 07.82
FIR PERSPECTIVE TELECOMMUNICATIONS GROUP, PARAMUS, NEW JERSEY
DET
KAP

ABS THE AUTHORS RATE THE TWO TECHNOLOGIES IN SEVEN CATEGORIES. THE
ABS LOCAL NET LEADS IN JUST ONE - TRANSMISSION SPEED.
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NUM 314
TIT LOKALE NETZE
AUT O.SPANIOL
QUE ---
KEY ARCHITEKTUR - ZUGANGSVERFAHREN - LEISTUNGSBEWERTUNG - NETZKOPPLUNG
KEY STANDARDISIERUNGSBESTREBUNGEN
KEY
DAT ---
FIR UNI FRANKFURT
DET
KAP

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NUM 315
TIT MODELLING AND EVALUATION OF SEVERAL INTERNAL NETWORK SERVICES
AUT G. PUJOLLE; O. SPANIOL
QUE
KEY
KEY
KEY
DAT 04.81
FIR ECOLE NATIONALE SUPERIEURE DES TELECOMMUNICATIONS; UNI BONN
DET
KAP

ABS THE RECOMMENDATION X25 DEFINES THE INTERFACE BETWEEN A NETWORK
ABS ACCESS POINT (DATA COMMUNICATIONS ENTITY, DCE) AND THE NETWORK USER
ABS (DATA TERMINAL EQUIPMENT, DTE) BUT THE INTERNAL NETWORK SERVICE MAY
ABS BE BASED ON DIFFERENT PRINCIPLES. SOME NETWORKS MAY USE VIRTUAL
ABS CIRCUIT SWITCHING AS AN INTERNAL SERVICE WHEREAS OTHERS COULD
ABS PREFER DATAGRAM SERVICE OR OTHER FACILITIES. THE OBJECTIVE OF THE
ABS PRESENT PAPER IS A COMPARISON OF 4 DIFFERENT POSSIBILITIES OT THE
ABS INTERNAL SWITCHING NETWORKS BY MEANS OF A MATHEMATICAL MODELLING
ABS ANALYSIS. THE MAXIMUM THROUGHPUT OF THE SYSTEM IS USED AS THE
ABS PERFORMANCE CRITERION. THE RESULTS PROVIDE A GLOBAL INSIGHT TO THE
ABS BEHAVIOUR OF THE SYSTEM WHEN DIFFERENT SWITCHING STRATEGIES ARE
ABS APPLIED. THEY MAY ALSO BE USED TO DETERMINE THE DOMAIN OF OTHER
ABS IMPORTANT PARAMETERS.
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TIT LOKALE NETZE: ARCHITEKTUR, STANDARDS, INTERNETTING
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ABS DIESE ARBEIT GIBT EINE UEBERSICHT UEBER ARCHITEKTURKONZEPTE UND
ABS KOPPLUNGSVERFAHREN VON LOKALEN NETZEN UNTER BERUECKSICHTIGUNG DES
ABS AKTUELLEN STANDS DER NORMUNGSBESTREBUNGEN (IEEE 802, ECMA).
ABS HAUPTGEGENSTAND DES ARTIKELS SIND EINE VERGLEICHENDE BESCHREIBUNG
ABS VON NETZZUGANGSVERFAHREN SOWIE EINE DISKUSSION VON UNTERSCHIED-
ABS LICHEN GATEWAY-KONZEPTEN ZUR KOPPLUNG VON LOKALEN NETZEN MIT
ABS ANDEREN LOKALEN BZW. NICHTLOKALEN NETZEN.
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NUM 317
TIT DATA LINK CONTROLS: THE GREAT VARIETY CALLS FOR WISE & CAREFUL ..
AUT U.D. BLACK
QUE DATA COMMUNICATIONS, JUNI 1982, S.111-128
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DAT 06.82
FIR FEDERAL RESERVE SYSTEM, WASHINGTON, D.C.
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ABS MANAGING THE DATA FLOW ACROSS A COMMUNICATIONS LINK WITH SOFTWARE
ABS AND HARDWARE AT EACH NETWORK SITE IS NO EASY TASK.
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